THIS WEEK'S National Petroleum NEWS

Coming Meetings

American Oil Chemists Society, New Orleans, La., May 14, 15.

Natural Gasoline Association of America, Mayo Hotel, Tulsa, May 19, 20, 21.

Wisconsin Petroleum Association, Hotel Pfister, Milwaukee, Wis., May 20.

Virginia Oil Men's Association, Charlottesville, Va., May 21, 22.

Fire and Safety Marshals, National Petroleum Association, Warren, Pa., May 28.

American Petroleum Institute, Division of Production, Baker Hotel, Dallas, Tex., June 3, 4.

American Society of Mechanical Engineers, National Oil & Gas Power meeting, Madison, Wis., June 15 to 18.

Society of Automotive Engineers, White Sulphur Springs, W. Va., June 15 to 19.

West Virginia Oil Marketers Association, Daniel Boone Hotel, Charleston, W. Va., June 18, 19.

American Society for Testing Materials, Chicago, June 22 to 26.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 16, 17, 18.

American Institute of Mining and Metallurgical Engineers, Petroleum Division, Houston, Tex., Oct. 2, 3.

American Petroleum Institute, annual meeting, Stevens Hotel, Chicago, Nov. 10 to 12.

Third International Conference on Bituminous Coal, at Carnegie Institute of Technology, Schenley Park, Pittsburgh, Pa., Nov. 16 to 21.

Geological Society of America, Mayo Hotel, Tulsa, Dec. 28 to 31.

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THE telephone rang in one of the offices on the top floor of the Standard Oil Co. of Indiana building in Chicago one day this spring, and Edgar Bogardus, assistant to the vice president in charge of sales, was summoned to report to the office of the president.

As he walked down the corridor to the front of the building Mr. Bogardus was thinking of affairs that might come up at the conference to which he presumed he was going. But in the office he found his colleagues gathered to present him with a diamond emblem in recognition of his forty years of service. President Edward G. Seubert made the presentation.

Mr. Bogardus became a Standard Oil employe on Dec. 1, 1890. He was promoted to traffic manager on July 1, 1901, and on April 1, 1920 he was promoted to his present position as assistant to the vice president in charge of sales.

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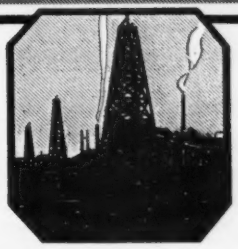


Branch Offices
Tulsa, New York, Houston,
Chicago

Vol. 23 CLEVELAND, May 13, 1931 No. 19

Ninety Per Cent of East Texas Wells Prorated; Yields Still High

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, May 9

SUCCESS of proration in the Sabine Uplift region of East Texas had to be considered, over the week-end, from varying viewpoints.

In terms of wells prorated and producers conforming to railroad commission oil conservation orders, the program was 90-odd per cent effective.

Barrels of excess oil coming out of the region, as compared with the 160,000 barrels ordered for May 1 by the commission, however, put a different face on the situation.

Daily average production for the week ended May 9 was estimated at 268,900 barrels, or 108,900 barrels above the allowable ordered. Field statistics as of May 7 gave the district's total wells as 383, of which all but 35 were prorated. Two days later, the wells had been increased to 389, but no figures were available on whether the number of non-conformers had changed.

Indications were that 35 wells averaging approximately 3110 barrels per day were being produced in defiance of state orders.

Of the non-conforming producer group, only the Lide-Rowe Oil Co., Shreveport, and associates, had gone to the courts. Approximately a dozen operators in the Longview, Kilgore and Henderson (Joiner) areas were going ahead paying little or no attention to state orders.

Records of Ray W. Richmond, umpire-in-chief for the region, show the non-conformers were MacMillan Petroleum Co., and Pilot Oil Co. (Cranfill & Germany), in the Longview area; Cranfill-Reynolds Co., controlled by the Moody-Seagraves interests, Republic Production Co., Horseshoe Syndicate, Luling Oil & Gas Co., and the Upchurch interests, in the Kilgore area; Cranfill-Reynolds Co., Roy I. Carter, George Anderson, Imperator Oil Co., Johnson Brothers and others, MacMillan Petroleum Co., Merrick Drilling Co., and Snetcher & Pitman in the Joiner area.

The Lide-Rowe Oil Co., and associates, took their case before Judge J. D. Moore in Travis county district court at Austin, seeking injunction against the railroad commission enforcing its orders as applied to their properties.

Other plaintiffs in the Lide-Rowe suit were the Bill & Dave Oil Corp., the Lide-Tayloe Co., C. M. Joiner, A. V. Lane, George J. Greer and J. Z. Werby. Their petition described five wells as producing 43,500 barrels daily but cut to 1935 barrels under state orders. After the suit was later denied without prejudice by Judge Moore in order that an amended petition might be submitted.

The petition, in general, is similar to that denied by Judge C. A. Wheeler in the Danciger Oil & Refining Co.'s case, originating in the Texas Panhandle. The railroad commission's proration order is described as unconstitutional because of depriving an owner of property without due process of law, and the petition further charges provisions of the statute governing physical waste are exceeded in the curb program.

Another injunction suit was filed May 8 in Judge Moore's court by the Central Pipe Line Co., of Shreveport, a short gathering system operating to railroad loading racks for tank car shipments.

In the pipeline suit, set for hearing next week, Central said

that it had spent $65,000 building from Overton to a lease on which there is one producing well, the company contracting to take 1,500,000 barrels of oil from that property. The petition said the well was capable of producing 24,000 barrels daily, but the commission had reduced its allowable to 387 barrels under proration.

In the Henderson, or Joiner, area wells are being prorated at 387 barrels because of the inability of establishing satisfactory potentials under the system observed in the Kilgore and Longview areas.

A number of the Henderson area wells will not flow naturally and are not equipped to pump under test specifications set up in the railroad commission order. Believing it impossible to obtain all the potentials, the umpire divided the total allowable outlet by the number of Henderson wells and obtained the 387-barrel figure.

The 172 Henderson wells producing 95,767 barrels daily average in the week ended with May 9 were 30,767 barrels above the commission allowable. At Kilgore, where 171 wells averaged 120,883 barrels, the overage was more than double the 60,000 barrels fixed for proration; and at Longview, where 46 wells averaged 52,250 barrels, the estimated overage was 17,250 barrels, compared with 35,000 barrels allowable.

Gaged potentials in relation to 20-acre prorating units at Kilgore and 40-acre units in the Longview area are used in establishing production yardsticks there. Approximate well averages under proration are 370 barrels in the Kilgore and 800 barrels in the Lathrop areas, variable in relation to gaged potentials.

Appearance of salt water in the Cranfill-Reynolds No. 1 Blackman-King test, W. P. Chisum survey, brought the number of wells showing encroachment in the Kilgore area to 14. When this was written no salt water intrusions had been reported on wells inside field lines in the Henderson or Longview areas, although brine completions had delimited producing territory on the west side of the district.

The first Kilgore area well to show water, Magnolia Petroleum Co.'s No. 1 Florey, was cemented back from 3656 to 3608 feet and then drilled to 3647 feet. On recompletion, it flowed 146 barrels the first 15 minutes, 26 per cent salt water, but the percentage was cut to 0.4 per cent when the flow was reduced to 247 barrels daily under proration.

Upshur county's first well, a north and west extension of the Longview district out of Gregg county, is the Mudge Oil Co.'s No. 1 Richardson in the David Ferguson survey. It is estimated good for 7000 to 8000 barrels, initial production, on short period tests. Sand was found at 3724-3740 feet.

Ray & De Montrand's No. 1 Bridwell, largest completion in Joiner area of Sabine Uplift region in East Texas. It was the first well in the district to come in without washing, bailing or swabbing. After packing off casing with a "boll-weevil" around the drill pipe the well was allowed to flow through drill pipe and rotary hose on through the standpipe to pump manifold, which was connected to 4-inch line to tanks. It filled four 1000-bbl. tanks in four hours

Governor Postpones Meet

TULSA, May 9.—Gov. Harry H. Woodring, of Kansas, has postponed indefinitely the conference of governors of 16 states which he had called for May 19 at Wichita. The conference will be held some time next fall, he said. Its purpose is to form a coalition of oil and agricultural states with a view to securing helpful federal legislation.

Starts Test in S. Dakota

TULSA, May 9.—Gypsy Oil Co. has started a test in 28-3N-16-E, Pennington county, S. D. This is about 75 miles east of the Black Hills and is 16 miles from the town of Wall. The test is in the center of a block of approximately 25,000 acres. The Pierre shale, of Upper Cretaceous age, is the surface outcrop and the well probably will be carried into the Pennsylvanian formations.

MacMillan Seeks Federal Injunction in Texas

By Telegraph

DALLAS, May 12.—A Federal court injunction was sought Monday before Judge Duval West at Austin, by Alfred MacMillan as an individual and as trustee for MacMillan Petroleum corporations of California and Delaware against East Texas proration.

Besides attacking railroad commission authority the petition charges an "illegal combination" between Chairman Terrell and Commissioner Smith to violate the State and Federal constitutions, the Sherman act and state anti-trust statutes.

Umpire A. B. Capers of Gregg County was made a party under an allegation that "under guise of being a state employee he is an employee of major companies who pay his salary therefore his position as umpire is not authorized by law."

MacMillan's producing wells are described as having a potential allowable of 54,000 barrels daily with a proration allowable of 1455 barrels. Contracts in effect prior to the state order are cited. The attorney general, who Saturday issued a statement that he would file injunction suits for enforcing proration against non conforming operators, had not acted Monday.

The Editors' Viewpoint

Why Does Compact Plan Lack General Consideration?

FOR a proposal of seeming great magnitude as is the proposed interstate compact, there is less interest in the oil industry which it is designed directly to affect than in any similar proposal in recent years. A far milder suggestion for legislation submitted more than two years ago by a committee of the American Bar Association was tried out on meetings of oil producers in Oklahoma and Kansas and was speedily voted down. When Mark L. Requa, acting on the call of President Hoover, submitted the compact idea at Colorado Springs in June, 1929, the meeting at times became a mild riot.

What is the reason for the apathy? Perhaps it is because executives are too busy these trying times at running their companies to pay much attention to legislative proposals. We know that some of them believe that no matter what the character of the restrictive legislation, it might be a help.

Rather,though, do we believe that the plan is not being taken seriously. Everyone realizes that there is no chance short of two years for consummation of such a compact, whose adoption would depend upon enactment of uniform legislation along the lines suggested. The legislatures of two important oil states, California and Texas, are in their closing days; the rest have gone home for two years. It is inconceivable that all the governors would call special sessions to pass upon this matter.

Then, he is foolish indeed who assumes that the legislatures will take the plan as it may be presented and pass it without change or discussion. When one remembers the long years of futile endeavor to get uniform state laws upon such comparatively simple questions as divorce, it is plain that such a complex question as conservation of oil will be threshed about and the issues confused almost beyond recognition.

It is one thing for "Cousin" Cicero I. Murray and the committee to propose something; it is another to get the people, through their lawmakers, to see it the same way. Many of them think conservation is a fine thing if it doesn't in any way restrict the state's development and markets, in which thinking they are not unlike some oil companies.

Then, there is the national Congress to be consulted. One can appreciate the juicy morsel the proposed compact will make for such statesmen as Borah, Nye, et al.

In the preliminary draft submitted by the legal sub-committee of the Oil States Advisory Committee it is evident that the views of the Federal Oil Conservation Board, as repeatedly stated by Dr. Wilbur, chairman of that board, have been given much weight. Thus the same general plan that the states, through accredited delegates, turned from at Colorado Springs, is coming back through the advisory committee. It was emphasized that this is a preliminary draft and that on Aug. 10 a meeting will be held in Denver to go over the subject again. It will be possible on that occasion for oil men to present their views.

Notwithstanding that nothing of the nature proposed can be placed on the statute books short of two years, it will be in order for oil men to give some heed to what is going on. There is no doubt that the political forces of the several states have wakened and they will be right in there tinkering with the oil industry from now on. It took several years of lecturing by the Federal Oil Conservation Board and by several men in the industry to stir up the local agents of government, but they are now active. Opportunism will play a sizeable role in the deliberations; this must be put down wherever found and the oil men themselves will detect it more quickly than will anyone else.

Tank Truck Monopoly Continues

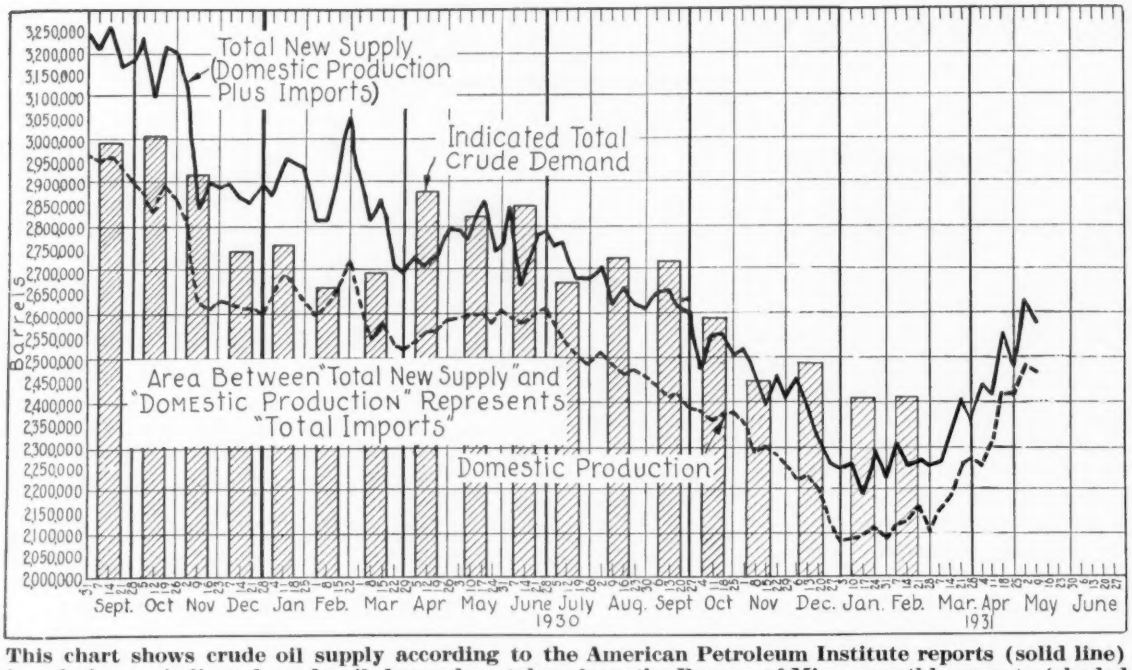
THE decision of Gov. Franklin D. Roosevelt not to hear the charges filed with him against Mayor James J. Walker of New York City and Tammany Hall, will tend to perpetuate the virtual gasoline truck tank monopoly which the Kenny brothers, Tammany Hall politicians, have held for six years.

The governor's action certainly will not open the New York gasoline truck tank market to general competition, nor will it make the "boys" from Tammany Hall any more disposed to throw open to fair competition any other market which can be throttled for the benefit of any Tammany politician.

Gov. Roosevelt was aware of the New York truck tank situation. He was informed in detail about the policy of obstruction of the New York officials this year by Augustine Davis, Jr., of Cincinnati. Backed by a biased statement of one of the chief obstructionists, Fire Commissioner John J. Dorman of New York City, Gov. Roosevelt declined to intercede in behalf of open competition.

There is still one avenue open to the tank manufacturers who have been shut out of the New York City market because of the Tammany Hall monopoly. That avenue is the prospective investigation by the New York State legislature of the administration of New York City affairs. The legislature is controlled by the political party opposed to Tammany Hall. The legislators uncontrolled by Tammany may step in where Gov. Roosevelt has feared to tread.

Review of Late Production News


Total New Supply (Domestic Production Plus Imports)
Indicated Total Crude Demand
Area Between "Total New Supply" and "Domestic Production" Represents "Total Imports"
Domestic Production
Barrels
Sept. Oct Nov Dec Jan Feb. Mar Apr May June July Aug. Sept Oct Nov Dec. Jan. Feb. Mar. Apr May June
1930
1931

This chart shows crude oil supply according to the American Petroleum Institute reports (solid line) in relation to indicated crude oil demand as taken from the Bureau of Mines monthly reports (shaded columns).

WITH an increase of 62,650 barrels in Oklahoma City daily average production and a decrease of 67,000 barrels in Kilgore, East Texas, the country's daily average output declined 6400 barrels, to 2,468,700 barrels, the week ended May 9, according to the American Petroleum Institute.

Crude oil imports were 110,715 barrels daily average, a decline of 36,700 barrels from the week ended May 2. Total new crude supply was 2,579,400 barrels, compared with 2,622,530 barrels the week ended May 2.

California

AN ACCURATE gauge of Petroleum Securities Felix 1, North Dome of Kettleman Hills, is still awaiting the erection of additional traps. Some field scouts give the well a possible production of about 10,000 barrels daily as against early estimates of 15,000. However, other experts believe the well will be capable of better than 20,000 when it has had an opportunity to clean out.

Late in the week Standard of California completed 7Q-21, section 7/22-18, Kettleman Hills, at 8091 feet for an initial production estimated as 7459 barrels of 36.9 gravity oil and 5,000,000 cubic feet of gas per day through a pair of one-inch beans. Excluding this well, production from the "Hills," totaled 33,314 barrels daily as of May 5 from 9 wells. Estimates give the field a potential production of approximately 225,000 barrels per day by August 1, providing for the completion of from 12 to 15 wells.

Current production in this country by pools is found on page 97.

A new field was apparently opened near Wilmington the past week by the completion of a wildcat test by Pacific Coast Petroleum Co. Bottomed at 3698 feet, the well was capable of about 200 barrels of 19 gravity oil per day, cutting 5 per cent. Mediocre production and low gravity of oil is expected to discourage immediate development of this area.

Oklahoma, Kansas

THE Oklahoma City field continues to gain a little in production and for the seven days ended May 8 it averaged 222,196 barrels daily. This is nearly 50,000 barrels per day higher than is permitted under the proration order, but much of the excess is to be made up before the month closes.

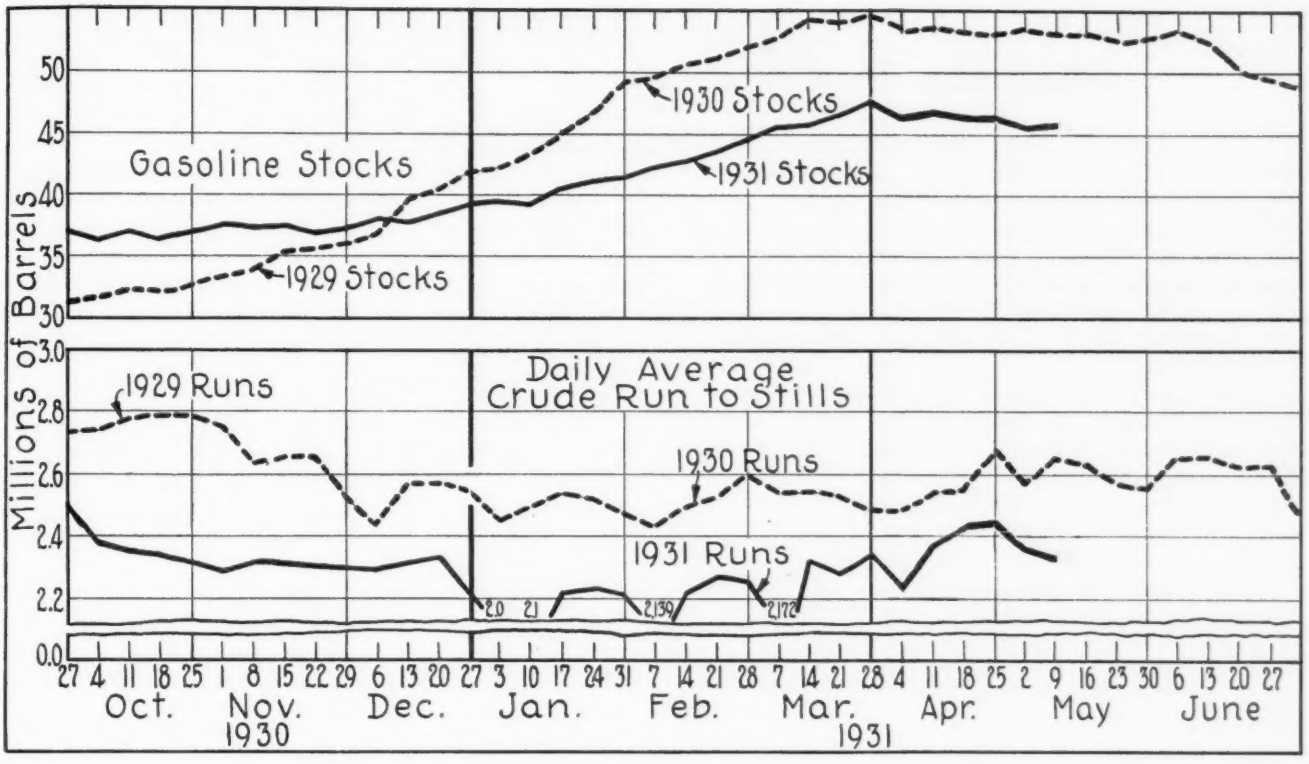
Pipelines are not running that much oil from the field. The nearest approach to it was on May 7 when they ran a total of 200,577 barrels, setting a new high record of runs from the field.

Texas, New Mexico, Louisiana

SHELL PETROLEUM CORP. has increased runs from the Hobbs field, New Mexico, to 6000 barrels daily. Production from the Permian salt basin region, which includes West Texas, increased to approximately 251,000 barrels daily. Total crude distribution in the region approximates 242,500 barrels, the excess going to storage. Lea county, New Mexico, including Hobbs, produces nearly 40,000 barrels of the total.

East Texas proration was described as 90-odd per cent effective over the week-end. Of 383 wells officially recognized May 7, only 35 were not prorated by owners. Less than a dozen producers were failing to observe proration.

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Gasoline Stocks Rise Despite Cut in Crude Runs

By Telegraph

NEW YORK, May 12

STOCKS of gasoline at refineries that report weekly to the American Petroleum Institute, increased 197,000 barrels in the week ended May 9. The stock increase came in the face of a sharp reduction in refinery operations, indicating a lower level of gasoline demand in the first full week of the month.

East and West coast refining groups made the largest additions to gasoline inventories and also the sharpest cuts in their scale of crude throughput. California refiners cut their crude runs 49,300 barrels daily average but were forced to pump 230,000 barrels of gasoline into their storage tanks. East Coast refiners added 263,000 barrels of gasoline to storage and cut their crude runs 12,900 barrels daily average.

Indiana-Illinois refiners, operating at the highest rate of any group in the country, added 126,000 barrels of gasoline to storage. This group increased its crude runs 3900 barrels daily average and was utilizing 88.4 per cent of its still capacity as compared with 65.1 per cent for the country as a whole.

One reason for the increase in gasoline stocks was a stepping up of cracking plant operations. Production of cracked gasoline increased 12,000 barrels daily average to 455,600 barrels per day.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Gasoline		Gas & Fuel Oil		Cracked Gasoline Production % of Total Capacity Reporting	Daily Av. Production (Barrels) Week Ended	
		May 9	May 2	May 9	May 2	May 9	May 2	May 9	May 2	May 9	May 9	May 2
East Coast	100.0	442,100	455,000	72.2	74.3	8,716	8,453	8,375	8,027	90.3	88,300	81,400
Appalachian	93.8	72,100	77,600	54.4	58.6	1,691	1,772	1,115	1,203	94.6	18,700	20,300
Ind., Ill., Ky.	97.5	336,900	333,000	88.4	87.4	6,317	6,191	3,622	3,589	95.2	96,000	78,200
Okla., Kans., Mo.	89.4	277,300	279,400	67.3	67.8	3,541	3,650	4,135	4,017	90.0	57,400	54,000
Texas	91.9	539,300	552,400	72.5	74.3	7,716	7,976	9,219	8,701	95.9	119,200	115,100
La., Ark.	98.3	162,300	159,600	61.9	60.9	2,304	2,305	2,385	2,299	97.7	25,000	31,900
Rocky Mountain	93.1	53,300	49,900	38.2	35.7	1,876	1,847	826	824	100.0	16,100	17,300
California	98.8	443,100	492,400	49.9	55.5	13,649	13,419	98,451	98,977	100.0	34,900	45,400
Total	95.7	2,326,400	2,399,300	65.1	67.2	45,810	45,613	128,128	127,637	94.9	455,600	443,600
Texas (Gulf Coast)	100.0	405,600	410,900	76.6	77.6	6,612	6,798	6,654	6,205	98.5	9,600	91,000
La. (Gulf Coast)	100.0	114,400	104,700	77.6	71.0	2,155	2,140	1,407	1,300	100.0	18,000	22,900

Sinclair Puts Third Grade in Ohio, Magnolia in Oklahoma

CLEVELAND, May 11

SINCLAIR REFINING CO. has introduced its third grade of gasoline, Sinclair Green, into Ohio. It was placed on sales in Cuyahoga county (Cleveland) only on May 6 at 1 cent under the posted price of the standard grade.

In the middle west the Magnolia Petroleum Co. is added to the companies selling a third grade of gasoline. Magnolia will market a blue gasoline in Oklahoma, but not in other parts of its territory.

Competing oil companies in Cleveland so far have not changed their marketing policies, either with a cut in price or a third grade, to meet Sinclair's third grade.

The Tulsa bureau of *Platt's Oilgram* continues to report an increase in buying of low gravity gasolines, and an increasing number of inquiries for blending naphthas.

Jobbers in Illinois are in accord with the third grade gasoline movement, according to replies to a questionnaire sent out by G. A. Primm, secretary of the Illinois Petroleum Marketers Association. Replies were published in the May issue of *The Oil Can*, official publication of the association.

Of the 11 replies published, eight were in favor of the third grade, one was against the idea, one was doubtful of the results, and one jobber suggested that other remedies were necessary to correct the marketing situation.

"The 'third pump' idea may not be as important as it now appears and unless competition forces us, we will see if the influence of quality and good merchandise will offset the competition of cheaper gasoline," wrote the Madison County Oil Co., Edwardsville, Ill.

"It is well worth the trial—a slow decision in this matter may be the means of saving money. Major companies have made mistakes before, as we all do, and it remains to be seen whether the new competitive grade of gasoline will meet public acceptance even though the price is right. This move may eliminate the trackage station."

One jobber, whose name was withheld, thought that the disturbed market condition was brought on by the Standard Oil Co. of Indiana by leaving the margin too long between the tank car and the service station price.

This jobber predicted that the low price gasoline and the Ethyl brand would be the two best sellers.

The Liberty Oil Co., Waukegan, does not see any serious menace to the new grade 2 cents under the market as it had this competition, but if "Standard and others are going to sell this to commercial accounts, etc., and allow rebates on quantities used, it appears to me to be a new threat against legitimate competitors."

INCREASED sales resulted from a third gasoline grade, so wrote the Atlantic, Pacific & Gulf Oil Co., Elgin, which had three grades several weeks prior to the Standard's announcement.

"We started selling this third grade at the price quoted by the cut price stations several weeks before Standard Oil came out with its program. We were under the impression that only a small proportion of the public was looking for a cheap gasoline, but in this we were mistaken," wrote this jobber from Elgin.

"Our sales of this cheaper gasoline increased in spite of valiant efforts on our part to sell our regular gasoline at the regular price. At the time Standard Oil announced its program our sales of the cheap gasoline at three service stations here equaled the sales of our regular and Ethyl combined."

"We do not feel that this schedule will eliminate the Independent jobber who conducts his business in a legitimate way and understands what he is doing and has capital enough to see him through the present situation," George C. Peterson Co., Chicago, which had a third grade prior to Standard's announcement.

"It may work out all right if all major companies install the third pump and do not cut prices on their regular products. I think it will help to eliminate price cutters," Poland Oil Co., St. Louis.

"I BELIEVE that had the Standard inaugurated a competitive gasoline six months ago we would not have the number of cut rate stations which we have today. I believe that it is the only solution to the problem," Hart Oil Co., Rockford.

"Without having seen it tried out for any period I rather hesitate about committing myself but on the face of it, it looks to me as though it would be a good thing for the Independent jobber as well as the major oil companies. . . . Of course, it goes without saying that if it is not used in the proper way it can be a very bad thing for the industry as a whole but I cannot help but think that there are enough sane people in the industry to at least give this marketing policy a fair trial," Richardson Lubricating Co., Quincy.

"In my opinion about the only thing that the large companies could do was to meet the price cutting that was going on in the gasoline market. If they had met this situation a year or two ago the market would have been stabilized long before this, providing crude oil production and refinery output could have been curtailed," Acme Petroleum Co., Chicago.

"I feel it is the only solution to the problem, since the price cutters have not sense enough to travel along with the procession," Illmo Oil Co., East St. Louis.

"It is our opinion that this is a constructive move and is going to mean an elimination of people who have crept into the business of distributing petroleum products and contributing nothing to the industry," Johnson High Test Oil Co., Freeport.

Indiana Jobbers Report Varying Results from Third Gasoline

Staff Special

INDIANAPOLIS, May 7

RESULTS of the introduction of a blue or green low priced gasoline in Indiana have been varied, according to statements of several Indiana marketers who this week attended the spring convention of the Indiana Petroleum Association.

Some marketers said they had gained gallonage after they had put in a third grade of gasoline. The gain has usually been in the low priced grade. A few have noted little change in total gallonage. One large trackage station operator said when blue gasoline was first introduced his stations noted a fall in gallonage but after a few days his regular customers, their curiosity satisfied, drifted back to him and his business was again on a level with what it had been before the competition of old line companies was introduced.

Blue gasoline was on the convention program but was not discussed in open meeting by the marketers. R. B. Stafford, NATIONAL PETROLEUM NEWS, outlined the background of the situation that led to the introduction of a third grade of motor fuel by the major marketers, and C. A. Beach, Empire Oil & Refining Co., recited the experiences of some middle western jobbers with the third grade the last few weeks.

The policy of one Wisconsin jobber was, in substance, to place a penalty on the sale of the third grade, Mr. Beach said. This jobber tried to keep third grade sales to less than 20 per cent of total gasoline sales at service stations. The larger the proportion of third grade sales to total gasoline was taken as an indication of poor salesmanship of the service station operator.

This jobber, Mr. Beach said, proposed to base promotions on the relative volume of sales of the three grades of motor fuel he was offering. The man who sold the least of the third grade in relation to total sales was the first in line for promotion or a salary increase.

Relative volume of third grade sales to total gasoline sales varied in different localities, interviews with jobbers revealed. In districts where low priced stations had made heavy inroads on the business of old line companies, the latter found a heavy demand for the low priced third grade when it was introduced.

Mr. Beach urged the Indiana marketers not to disparage their third grade but to tell, motorists that it was the kind of gasoline they bought four or five years ago but which was not the best fuel for modern high compression automobile engines; that they would get better performance from the regular and premium grades than they could hope to get from the low priced grade.

Mr. Beach also warned them not to color their regular grades and market it in competition with other low priced gasoline but to buy a special grade, usually straight run gasoline, to meet the new competition.

Mr. Stafford predicted that the third grade would be on the market until all divisions of the petroleum industry became stabilized or until supply could be balanced with demand. The introduction of the third grade, he said, was an incident in the effort to stabilize the marketing division.

The great gains made in volume of sales by the low priced stations was brought about in large measure the last year, he said, by general business conditions. Many people had less money to spend, he said, and were buying more closely and watching the pennies.

"Shall the Indiana jobber install a third grade?" he queried. "How can he keep from doing it with low priced competition coming from trackage stations, farm bureau outlets, and major companies? The jobber may meet the competition by lowering the price of his regular grade but that would reduce his dollar volume of sales with customers who buy quality regardless of price and might bring retaliation in the form of a lowering of the whole price structure. With a third, low priced grade he can meet the competition and still push his regular and premium grades which he can sell at a profit.

"The chances for reasonable profit on a third grade are small but it may be possible to spread operating overhead over a larger volume of business. It appears that this will be a hard year for the jobber but he can weather the storm if he is careful."

A proposal to organize zone clubs of oil men over the state received the general approval of the association. Max L. Wickersham, secretary, and a committee will work out details for a club plan.

Walter S. Bossert, Indianapolis, attorney for the association, recommended that Indiana oil men work in the next meeting of the legislature for a state petroleum department where they may centralize their contact with the state. At present oil men must deal with three or four state bureaus in inspection and tax matters.

Edward Hunter, secretary of the Indianapolis Chamber of Commerce, in welcoming the oil men warned against misrepresentation in price signs. He said the practice of placing the price in large figures and putting below the figures in small letters, "Plus Tax," left a bad impression with most motorists.

Herbert F. Davis, president of the association, responded to the welcome.

Today's Chance for The Real Marketer

By V. C. Comstock*

Delivered before Indiana Petroleum Association at Indianapolis, May 7

IT SHOULD be apparent to you men engaged in the oil jobbing business, that a very decided change has taken place in the marketing end of this business as contrasted with five or ten years ago. Like many comparatively new industries, we have been so busy the past ten years trying to catch up with an ever increasing demand for our products, that we have been blind to the fact that there is such a thing as a saturation point.

Marketing outlets have been increasing throughout the country until we now find ourselves in a situation of serious overexpansion. With this over-expansion has come keen competition and this same competition will eliminate from the marketing picture of the oil industry today, those that are not awake to the changing times.

A number of fundamental causes underlie this marketing situation that we are in today. I believe they can be summarized briefly by the following five essential points:

1. An overexpansion of marketing outlets to the end that many outlets are operating without a profit.

2. Competition has increased to the point of offering the buyer nearly anything that he asks.

3. Margins of profit on your staple line, gasoline, are narrowing.

4. The buying public is becoming better informed and more critical today.

5. The oil business is becoming more of a science than was true of the hit and miss days of yesterday.

To meet the situation in the marketing end of the oil business that these causes have produced will require a drastic housecleaning on the part of many an oil jobber. If you are content to set on the side lines and watch this procession pass by, you may find yourself tomorrow wondering where your business has gone.

You have but to look around you at other lines of business in your own town to see very apt parallels of this change that is taking place in all business. . . . In these examples we see pointed illustrations of what is going to come about in this oil business within the next two and three years.

I do not mean to imply that you are going to have to spend large sums of money to build expensive one-stop stations, but you can copy many of these ideas of aggressive oil marketers with only a small outlay. Generally all it will take is to apply some fresh paint, erect a few attractive signs, and give your place of business a real housecleaning. This housecleaning that I speak of should extend all the way from the keeping of records in your business through to the building up of a sales force that can do a real job of selling under present day competition.

I have selected four essential factors in oil merchandising that I believe offer the biggest opportunity for improvement in the average oil jobbers business of today.

1. The first point that you should look into in your business is to modernize and improve the attractiveness of your service stations and truck equipment and then give attention to better display of your merchandise.

Do you know why people patronize certain places of business? Many successful retail business stores have learned that the answer to this question lies in more attractive store exteriors and better displays of merchandise that arouse interest in buying. One large successful store in this country found that at least 85 per cent of the impressions people get that lead to buying, come through the eye. It should, therefore, be evident to you that it is necessary to do something to attract the motorist into your place of business before you can get a chance to sell him.

The average jobbers' service stations today could be trans-

*Sales Department, Skelly Oil Co., Chicago.

Ten Things a Customer Likes

HERE are 10 things a customer likes in a service station, V. C. Comstock told Indiana jobbers:

1. Quick service that anticipates the customer's wants.
2. Meeting the customer with a courteous salute and a real smile.
3. Accurate attention to serving them what they need.
4. Truthfulness about your products.
5. Prices in plain sight so they can figure their purchase.
6. Clean attractive exteriors of stations and drives.
7. Attractive displays of your merchandise.
8. Spotlessly clean toilet facilities.
9. Money-back guarantee with a trial purchase.
10. Counting change back correctly and a pleasant request to return.

formed into as attractive places of business as some of the more costly stations of the major marketers with the addition of a few painted display boards as a background, the application of plenty of attractive fresh paint and other general dressing up which does not require any great outlay of money. Take some of these ideas which you have observed are used in dressing up these more expensive stations and use them to make your stations more attractive to the passing motorist.

I have observed that a number of aggressive jobbers have completely transformed the general appearance of their stations by simply erecting several attractive display boards as a background for their stations. On these display boards they have painted advertising of the products which they market or an appealing sales talk about their service.

If you have your stations cluttered up with a lot of weather-beaten, unsightly signs you will do well to remove them and replace these with signs placed around your station in such a manner as to avoid confusing the motorist as he drives in. At a very little cost you can clean up your drive-ways and paint the edges of your pump islands, air stands and drain pits white. To do so gives the impression of quality in the products that you market.

No better investment offers itself to you than the providing of floodlights to illuminate your station at night. The ever-increasing number of tourists that travel at night to get away from the hot sun, are attracted to a place of business that is illuminated with an abundance of light.

Keep your service station salesmen in clean white union-alls even if you have to supply them and pay the laundry bills. You will find it a good investment. It has a real appeal particularly to women drivers.

Provide well arranged and immaculately clean ladies' and gentlemen's toilet rooms. Inspect these toilets and rest rooms constantly to see that they are kept attractive and in perfect order. This is one of the cheapest investments in drawing and holding tourist trade that you can make. One aggressive oil jobber in northern Minnesota that I have contact with, spent a considerable sum of money in finishing a ladies' rest room in beautiful light green, even to and including hand towels and toilet paper. This may seem to you a rather foolish investment but he found that dozens of tourists returned to his station because the women folks had remembered that attractive rest room.

If you have been careful in your observations in looking over these attractive one-stop stations, you have noted the absence of benches for loafers to sit on. A service station is a place of business and should not be made a loafers hang-out. The quickest way to remedy this evil is to eliminate the loafers seat. People do not like to patronize a place of business where idlers hang out.

Since the nerves of the eye are 22 times stronger than the nerves of the human ear, the proper displaying of merchandise and samples, that will sell your several services offered, has in it real possibilities to increase your sales and profits. Of all the phases of oil merchandising, probably the one that has been given the least attention by the average oil jobber, is the arranging of proper window displays and pump island displays to create a desire for the merchandise or services on the part of the customer.

More than ever before in this oil business, you are faced with the need of making a profit from your other lines than your staple line — gasoline. Wide-awake and aggressive oil jobbers know that excellent profits are being made by pushing the sales of motor oil, in selling more crankcase refills, selling more grease jobs, and aggressively selling easily applied automobile specialties. While you are filling a customer's car with gasoline and oil, he is often a real prospect for such accessories as a fan belt, light bulbs, spark plugs, anti-freeze s o l u t i o n s, tire chains, tires and tubes, a tool kit, flashlights, tow ropes and an endless list of items that go with the camp outfit of the travelling motorist.

These specialty goods have to be sold as they do in any live automobile accessory store. But you should copy the idea used in these modern stores of creating a desire for these goods by properly displaying them both by window displays, interior showcase displays and the pump island display showcase. Unless

Ten Ways to Get and Hold Customers

THESE 10 rules for service station salesmen were given Indiana jobbers by V. C. Comstock:

1. Always address your customers by name, if possible, or if they are strangers, by courteous saluations.
2. Approach customers briskly and with a smile, to show them you are interested in them.
3. Let waiting customers know they will be served in a few minutes.
4. Suggest merchandise that you believe the customer needs. He will appreciate it if you do it tactfully.
5. Tell the truth about the products you sell.
6. Learn the preferences and whims of regular customers.
7. Avoid arguing with customers. You will never sell them in that way.
8. Be courteous always, even to hard-to-please customers.
9. Adjust complaints promptly and tactfully.
10. Be human by showing genuine interest in your customer.

a motorist who enters your station shows evidence of being in an extreme hurry, the mere suggestion of one of these items may result in a sale and an extra profit that you otherwise would have lost.

If you have display windows facing the driveways of your station, you should clean them up and arrange in them attractive seasonable displays of specialties and your case goods. Get these display windows to working for you. Do not try to display too many items at a time in your windows. You will find greater attention-getting value can be gained by displaying and featuring one item at a time with an attractive show-card as a background, focusing the motorist's attention on the display.

Because of the fact the average motorist does not get out of his car or if he does, only goes around to the back to watch the tank filled with gasoline, you should provide each of your pump islands with a visible display case for the displaying of your motor oil bottles of the several grades. On the top of this case is the place to display specialty products and case goods.

You should also display on the top of this case, a set of your oil sample bottles and a supply of leaflets that describe your products. While the service station salesman is filling a customer's car with gasoline, he can hand the motorist a leaflet and a sample to be looking at, which in many cases will result in a sale that you would not have made.

ANOTHER place for displaying merchandise that has been tried out by a number of jobbers and proved to be highly successful, is the visual side-rack display cases for tank trucks. In the past, many jobbers have permitted their truck salesmen to go into the country with nothing more on their side-racks than a couple of 10-gallon lube cans and probably an oil dirty tow-rope or a pair of chains.

These side-racks of your trucks offer excellent possibilities for the display of your case goods, on which you make a real profit. A visual side-rack display case is now on the market and has been used by a number of jobbers and found to have materially increased the sale of side-rack specialty goods.

One truck salesman sold more case goods the first month with one of these side-rack display cases mounted on the side of his truck, than he had sold the previous year. In this side-rack display case can be carried a set of oil sample bottles and leaflets describing your several products.

2. Give service at your stations and from your tank trucks, that is actually outstanding.

Because the motorist today is receiving better service in all lines of retailing and the fact that many large oil companies have already given him a taste of this new type of service, he expects it at your stations. Service in this day and age means selling your merchandise by anticipating your customers' wants, meeting your customer with a smile and sending him away with a feeling of having received personal attention.

Motorists remember that kind of service and return to stations where they receive it.

If you have not already installed at your station, a uniform nine or ten-point service, you will do well to adopt it at once. It is the coming program in service station merchandising. Many of the major companies have already adopted such a uniform service and have trained their men in the giving of it exactly as laid down. It has been proven in practice to build business and that is justification enough for its existence.

The nine-point service plan suggested today may seem a rather lengthy operation to go through with each customer coming into your station, if the service station salesman works fast, the customer will not notice the short time he spends in your place of business. The service station salesmen should be trained to observe accurately, each customer as he drives in.

When a customer drives into your station at a high rate of speed, it pretty generally indicates that he is in a hurry. You should actually run out to serve this class of customers for unless you do, after driving at high speeds he will think you are unusually slow in your service and is very apt not to return.

Women motorists in particular, are appealed to by little extra attentions. They will be impressed if you give them this uniform service for it will build confidence in the fact that you look after all their motoring needs when they visit you. You should train your men to be particularly observing in looking over a customer's car, for the mere suggestion of the fact that one head-light may not be burning to a customer, may result in the sale of a new bulb.

A factor of considerable importance in securing and holding tourist trade, is to have your service station salesmen posted on, up-to-the-minute highway information. You should have mounted in a glass enclosed bulletin board, facing your service station drive-way, a highway map of your state that will show the latest detours. Instruct your service station salesmen to give tourists accurate information on detours, tourist camps, and hotel and restaurant information. You will find it will result in hundreds of motorists returning to your station on their return trip.

THE service that you are giving through truck deliveries is a subject that along with service station service you will do well to investigate. With the number of oil trucks that are driving through the country today, it is imperative that your truck salesmen solicit all of your customers and prospective customers regularly in order to get and hold their business.

The essence of good truck service is being there with the goods on time, particularly in busy seasons. The days of letting customers call up on the phone for gasoline and kerosine, in heavy consumption periods, have passed.

The way to work this truck business systematically is to lay out a system of routes similar to mail routes, out of your town and to have your truck salesmen work a certain number of these routes regularly and be constantly soliciting new customers of worthy credit.

Many jobbers are falling into the bad practice of neglecting to

go with their truck salesmen periodically on these routes to see whether or not they are calling on all of the prospective buyers whose credit is worthy. You can set up a simple card system listing all of these customers on each route and post their purchases daily. In this manner at the end of the month, it will be a simple matter to check up with each truck salesman and find out those customers and prospects that he is failing to solicit. In this day of keen competition you have got to sell your merchandise by repeated solicitations. Hit and miss methods in this end of your business may result in the loss of some very substantial gallonage.

The kind of service that rural customers like is the service of the trained truck salesman who is interested enough in their business to observe their needs and suggest such items as grease, motor and tractor oil and other specialties, before they run out.

Cleaning your customers' barrels each spring and fall with a small amount of kerosine and then rinsing them out to remove condensation and dirt that accumulates, may result in the making of a permanent customer. More than ever before, real service on the part of your truck salesmen today will be an important factor in the building of your business.

3. Improve your retail salesmanship.

Your retail salesmen have a direct effect on your net profits. As a matter of fact, they determine how much you will make or lose in your year's business. It will pay you to know exactly what each of these men is producing for you in the way of a profit. You should use care in employing the men that are going to be your service station salesmen and truck salesmen.

There is a big difference between employing a man to pump gasoline from a service station pump and employing a real service station salesmen. No jobber's organization will ever go far without man power that knows how to sell.

Once you have these men employed and are satisfied that they have the make-up of real salesmen, then you should set about increasing their effectiveness. There never was a time in the oil business when this point was so pertinent as today. It is common knowledge to those versed in the business of selling, that the factor of confidence is one of the first essentials to any sale. Remember, nothing creates confidence in a retail salesman as does knowledge of his products and how they will serve the consumer.

The way to teach your men, what they need to know about your products to sell them effectively, is to hold sales schools at least twice a month in the evening. You should ask the sales representative from your source of supply to attend these meetings from time to time and talk to your retail salesmen on how to sell your products.

Secure a list of books on petroleum subjects that will give your men the knowledge they need of petroleum products, in order to make an intelligent sales talk. Some of the answers put out by retail salesmen of oil jobbers to questions asked them by motorists about gasoline, should indicate to anyone engaged in this business, the need for training schools.

After you have started to hold these schools, you should then go out with your men to solicit new business. In this way you can show them the practical application of these selling ideas that you have taught them. You will be surprised to learn, perhaps, the amount of business that you may have been overlooking by this personal contact with your trade in company with your men.

An idea commonly used by retail motor car concerns, is the monthly quota board and rec-

Nine Point Service

HERE is a plan of nine-point service used at Skelly Oil Co. and Skelly jobbers' stations, which has proven exceedingly effective, V. C. Comstock told Indiana jobbers. The nine points of service that must be rendered by every service station salesman, are:

1. Be at the side of the customer's car when it stops and greet the customer with a smile and a salute of friendliness.

2. Remove the radiator cap and fill the radiator with water, being careful not to overflow it.

3. Clean the windshield and headlight glasses with a sponge and chamois and do this with all possible haste.

4. Solicit the gasoline sale by asking the customer if you can fill his tank *full* with either of your two higher grades of gasoline.

5. Solicit the motor oil sale or crankcase drain and refill by lifting the hood and checking the motor oil gage and examining its condition.

6. Solicit the grease job and transmission and differential flush and refill by pointing to the drain pit or life and explaining the short time that it takes to complete the job.

7. Make the collection by itemizing for the customer, all the items in the sale and count the change correctly by starting with the amount of the sale and counting to the amount of money tendered.

8. Ask to check the tires for proper inflation and make the solicitation for a tire or tube sale if it appears needed. Also suggest other accessories that the motorist may need.

9. Give the customer a send-off with a hearty thanks for the patronage and a request to return for his next service.

ord of sales. If you have two or more truck or service station salesmen, it will pay you to install one of these quota boards and to work up interest on the part of the men in watching their daily sales build up against their monthly quotas.

The instituting of monthly contests with a small bonus reward for the winner, will prove a real spur to increased effort by your men. These truck and service station salesmen should be remunerated on a part salary and part commission basis or a basis of all commission. The incentive that lies in the extra earning possibilities, for extra effort, in a commission plan, will do much to increase your business.

4. The value of using original local advertising and using it consistently to create a demand for your products.

The purpose of all advertising is to create acceptance for your merchandise. Once the desire is aroused in the customer's mind to try your products, you have an excellent opportunity to sell him. Because of the fact your customer is constantly being tempted by the advertising of major companies and competitive jobbers, you must invest in an aggressive local advertising campaign, if you expect to get your share of the business today.

If you are handling a brand of products that is advertised by your source of supply, you will do well to tie in with this consumer acceptance, they are building for your product over a wide area and capitalize on its benefits locally.

The aggressive oil jobber should spend as an advertising budget yearly, at least 1½ to 2½ per cent of his net sales. Other merchants in your town spend as much as from 2 to 4 per cent of their net sales in local advertising. Your business is not any different than that of the average general store merchant in that you have got to create an impression in the minds of your local customers that in your products you are offering a bigger value for the same money.

If you are buying quality products, you should play this up in your advertising and in your selling talk, making a bid for business on the basis of giving the customer a bigger value for his dollar.

The essence of successful advertising is to inject originality into it and once you have attained that, you must advertise consistently if you expect to get returns. The evidence of this is shown by the consistent use of advertising space by all large retail concerns. Aggressive jobbers who have tried out many of the numerous advertising mediums offered, have found that those that are most effective in the oil business are included in these that follow:

1. Highway boards and road signs.
2. Local newspaper advertising.
3. Direct by mail advertising.
4. Local radio stations, if available.
5. Attractive service stations signs.
6. Live specialty advertising such as road maps, oil meters, radiator front protectors, etc.

A number of aggressive jobbers in the Middle West, have found that the erection of large painted highway boards, facing the tourist as he approaches their town that tell of the service that he offers at his stations and how to reach them, have proved an excellent investment. Road signs that tell the motorists of your products and service, as they ride along, are an excellent means of outdoor advertising, provided they are original. Few of these road signs along the highways today, are outstanding enough in original design to attract the motorist's eye.

The National Safety Council no-accident driver award, given to commercial vehicle operators who drive a year without accidents. Actual size of medal is 1⅛ by 1⅜ inches

When you have hit on an original design, be careful not to put too much copy on it and be sure to put direction markers on the top or bottom to tell the motorist how to get to your stations.

In the smaller towns and cities, the use of local newspaper advertising is an exceedingly effective medium of building consumer acceptance for your products. The folks in a smaller town read the papers more thoroughly and if your advertisements are distinctive and contain live illustrations, you will get results from this type of advertising.

Another form of advertising that has proven exceedingly effective with many aggressive jobbers, is the use of a series of direct by mail letters. These letters must be original and contain a personal touch, if you expect to have them read. This is one form of advertising that offers you an opportunity to check results. You will find that sending a series of well-written letters to good prospective customs, will materially help your retail salesmen in wedging into this business.

Those jobbers who have available local radio stations, have found that this form of advertising is particularly effective if the programs are worked out to secure local interest. Care should be used in radio advertising to hold down the selling talk used in telling of your products or service to a minimum of words. A few well-worded remarks are far better in this form of advertising than too much.

There are countless other forms of advertising including specialty advertising, hand bills, supplying of your trade-mark insignias for baseball teams, etc., that will help to put your name before the local public. Aggressive jobbers that intelligently are spending a very sizeable sum of money each year in this field, find that local advertising is a big factor in increasing their business.

Standard of Indiana Nets $46,000,000 After Large Inventory Mark-Down

CLEVELAND, May 11 STANDARD OIL CO. of Indiana and subsidiaries netted $46,371,438 in 1930 after interest, reserves and taxes, and writing down inventories $17,026,963.59 to the lower of cost or market. This was the first consolidated statement of the Standard of Indiana and subsidiaries and no comparison is possible.

The parent company in 1929 netted $78,499,754, this sum including only the dividends received from subsidiaries and not the parent company's share in net earnings.

The consolidated 1930 earnings averaged $2.73 a share on the 16,996,595 shares of $25 par stock outstanding at the end of the year.

The main subsidiaries of the Standard of Indiana in 1930 were Pan American Petroleum & Transport Co., Midwest Refining Co., Stanolind Crude Oil Purchasing Co., Stanolind Pipe Line Co., Dixie Oil Co., and McMan Oil & Gas Co. Since Jan. 1 the assets of the last two companies have been taken over by the newly organized Stanolind Oil & Gas Co.

Crude oil production of the company's subsidiaries totaled 63,084,000 barrels in 1930, compared with 62,106,972 barrels in 1929.

At the end of 1930 producing subsidiaries held 171,941 acres of proven oil lands, and 6,664,942 acres of unexploited land. The subsidiaries released during the year more than 200,000 acres of unproven land.

Potential production of the McMan was given in the annual report of President E. G. Seubert as 298,000 barrels daily of which 132,586 barrels was in the Hobbs field of New Mexico. Mr. Seubert said the more valuable McMan properties were in the Yates field in Pecos county, Texas.

Crude oil transported by the company's pipeline system totaled 40,740,693 barrels in 1930, compared with 41,035,934 barrels in 1929. The system comprises nearly 4400 miles of trunk lines and about 2500 miles of gathering lines.

Marine facilities, those of Pan American, include 34 ocean tankers. These and chartered ships transported 46,638,621 barrels of crude oil and refined products, compared with 47,600,901 barrels in 1929. The four lake ships and one barge of the parent company transported 7,823,100 barrels of crude and refined oils from Muskegon and Whiting to Great Lakes ports compared with 8,997,987 barrels in 1929.

Refining facilities of the parent and subsidiaries include nine plants with a daily charging capacity of 394,000 barrels. These plants ran 99,613,851 barrels in 1930. Operations of the Aruba, Dutch West Indies, plant were included for the first time. The plants exclusive of Aruba ran 100,371,261 barrels in 1929.

In the latter part of 1930, Mr. Seubert said, operations were curtailed and at times refineries were operated at as little as 50 per cent of capacity. Employes affected by the curtailment were placed at other work, he said, on a part time basis. This aided in stabilization of employment but added to the unit costs of manufacturing, he asserted.

Combined sales of all companies totaled 113,999,764, barrels, Mr. Seubert reported. At the end of 1930 the Standard of Indiana group had 4783 bulk plants, and 11,074 owned or controlled service stations. Foreign operating subsidiaries had 14 ocean terminals, 59 interior bulk plants, and 70 service stations.

Results of selling tires and tubes, begun late in the year, have encouraged the belief that these automobile commodities will add to the company's earning capacity, Mr. Seubert said.

Mr. Seubert's general observations on the industry follow:

"Co-operation in following the guidance of the Federal Oil Conservation Board as to curtailment of production and manufacturing involved reducing exploration, producing and refining. This action contributed materially toward the good progress made by the industry in its striving for a better balance between supply and demand. But it was demonstrated that reduction of output and stocks is not alone sufficient to preserve sound conditions in the industry so long as any considerable supply of crude or fin-

1930 Consolidated Income Account of Standard of Indiana and Subsidiaries

Gross operating income		$457,106,816.73
Costs, operating and general expenses	$321,728,597.15	
Inventory adjustment	17,026,963.59	
Taxes, exclusive of gasoline	13,723,549.74	
Intangible development costs	3,602,992.93	
Depletion and lease amortization	5,233,466.51	
Depreciation, retirements and amortization	49,409,292.64	
Total operating charges		410,724,862.56
Net operating income		$46,381,954.17
Non-operating income		8,645,357.73
Total income		$55,027,311.90
Interest		4,763,784.70
Profit for period		$50,263,527.20
Minority interest in profit		3,892,089.32
Net to Standard of Indiana		$46,371,437.88

ished products remains without a ready market.

"Under pressure of the depression and competition, many producers and refiners resorted to selling at distress prices. This practice reached sufficient proportions to affect the business of marketers generally and caused repeated adjustments in the price structure downward. It is hardly necessary to add that your company had no part in this distress selling. Even importations of gasoline by Pan American, which have been attacked as contributing to the unsettling of the market, were upon fixed contracts and at market prices.

"The lower prices of 1930, resulting from defense of established business against cut-price selling, spelled great financial loss to the industry.

"Doubtful conditions have carried over into 1931. The bringing in of much new production, especially in East Texas, is a very disturbing factor, threatening to give cause to additional distress selling.

"Efforts to bring about a suitable balance between supply and demand must be supplemented by adherence on the part of all producers, refiners, and marketers to the policy of conducting their business on a sound business basis. To this policy your company stands committed."

The company's consolidated balance sheet of Dec. 31 shows assets of $801,184,071, after deduction of depreciation, depletion and other capital reserves of $407,935,153.

Current assets amounted to $265,834,246 of which sum $88,135,357 was cash and marketable securities. Oil inventories amounted to $117,198,969 at cost or market, whichever was lower and after a mark-down of more than $17,000,000.

Current liabilities amounted to $49,338,886, making net working capital $216,495,360. The parent company had no funded debt but long term obligations of subsidiary companies amounted Dec. 31 to $57,879,367, most of which amount represented obligations of the Stanolind companies, former Sinclair companies, in which full interest was bought last September. The Standard of Indiana formerly held a half interest in the two companies.

Surplus Dec. 31 amounted to $251,120,435, of which $92,281,647 was earned surplus and $158,838,788 capital, paid-in surplus. Indicated book value of Indiana stock at the close of the year was $39.85 per share.

The Standard of Indiana group last year paid out $13,723,550 in foreign, federal state and local taxes in addition to $47,651,658 gasoline taxes. Mr. Seubert pointed out that the gasoline taxes exceeded the net earnings. He predicted that eventually high gasoline taxes would seriously affect consumption.

At the end of the year the Standard of Indiana had 44,500 employes and 90,851 stockholders. There were about 20,000 employe stockholders who held 557,000 shares.

Scheumann Made Empire Chief Chemist

TULSA, May 9.—W. W. Scheumann, formerly chief chemist for the Cities Service Refining Co., has been made chief chemist for the Empire Oil & Refining Co. He is making his headquarters at Okmulgee, Okla.

Mr. Scheumann is a graduate in chemical engineering of Purdue University. He joined the Cities Service Refining Co. in 1924, coming from the laboratories of the Aluminum Co. of America.

W. W. Scheumann

Todd Heads Columbia Oil And Trinity Firms

HOUSTON, May 7.—Warren L. Todd, who resigned as production vice president of Simms Oil Co. effective June 1, will head the newly formed Columbia Oil & Gas Co., a close corporation, as president and general manager. He will occupy a similar position in the Trinity Drilling Co., in which he takes a one-third interest, in association with J. M. and J. L. Rush. Messrs. Rush are also associated with Mr. Todd in the Columbia concern, a Texas corporation with $200,000 capital.

In addition to production in Loving county and leaseholds in Ward county, West Texas, the Columbia company owns one completed well in the Lathrop area of Gregg county, East Texas. Three others are drilling in the Lathrop area.

Headquarters of the two companies will be in Dallas.

Pure Oil Official Marries

TULSA, May 9.—R. H. Carr, chief production engineer of the Pure Oil Co., was married in Chicago, April 17. Announcements recently received in the Mid-Continent reveal that the bride was Miss Florence Anne McIver, daughter of Mrs. James Francis McIver of Chicago.

Mr. Carr has been with the Pure for a number of years, coming to the company in 1918 as manager of the gasoline department. At the present time, in addition to the position given above, he is also general manager of the gasoline division, and has executive charge of the gas and material departments. Though a large portion of his time is spent in the branch offices of the company, his headquarters are in Chicago where he makes his home.

To Test Air Conditioning with Gas This Summer in Three Homes

MEMPHIS, May 11

GAS as a means of house cooling and air conditioning has passed the laboratory and experimental stage and will be given a field test this summer, so Eugene D. Milener, industrial research representative of the American Gas Association, told members of the natural gas department of the American Gas Association in convention May 11 to 14 in Memphis.

Three homes will be air conditioned and cooled by the Committee on Industrial Gas Research this summer with gas. These are in different geographic sections of the country so a variety of climatic conditions will be encountered. One home is on the Atlantic seaboard, one in the middle west, and another in the south.

Considerable importance is given the tests as marking a step in the development of another mark for gas, and a market that will help match the peak load of winter demand.

This will be the first major application of gas, the speaker said, that will not conflict and compete with other forms of fuel.

Gas for summer air conditioning will rank with the adoption of gas for heating homes and water, cooking, and refrigeration, Mr. Milener predicted.

"I am sure that if history repeats itself, private dwellings will prove to be the most profitable phase of summer air conditioning, as it has proved to be the most important factor in gas house heating," he said.

"I predict that within less than five years, complete residential summer air conditioning, the kind that burns gas in the summer time, will become quite general in the better grade dwellings, and will be seriously considered by everyone building a home within that class, as well as by owners of old houses with warm air furnaces."

Summer air conditioning, so far, has been developed for using power and practically all installations are in public buildings, theaters, or restaurants, Mr. Milener said. Apparently there are limitations to the extent to which power operated air conditioning equipment can be applied generally. These limitations have effectively barred the introduction of summer air conditioning into residences.

There are two problems to summer air conditioning: cooling and dehumidifying. Cooling can be done by refrigeration while dehumidifying can only be accomplished by refrigeration in a very indirect manner, he said.

"By far the greatest amount of energy required on an air conditioning job is that used for dehumidifying and that the energy used for the necessary cooling of the air is the smallest amount," the speaker continued.

The Committee on Industrial Gas Research found that power energy is adaptable to cooling and dehumidifying buildings only by means of refrigeration but that gas heat energy not having the limitations of power energy is in addition adaptable to dehumidifying air directly and thereby utilizing an air conditioning cycle that is entirely new.

THE research committee deemed it advisable to advance the program of air conditioning by concentrating on methods that had progressed fartherest, and investigation showed that this had been in a system based on the properties of silica gel.

Silica gel, with the same chemical analysis as sand, is a hard, glassy material with the appearance of clear quartz sand. It is highly porous and the pores are so small that they cannot be seen even with the most powerful microscope.

A quantity of silica gel placed above water in a closed vessel will absorb water vapor to the extent of 40 per cent of its weight. Heat will drive out the water vapor.

This is the application of silica gel to dehumidifying air. Moisture from the air is absorbed as it passes through, and the water then driven off by heat.

ADVANTAGES outlined by the speaker for silica gel are that it is possible to control the humidity of the air independently of its temperature and that this system does not require skilled operators, an important point especially in residences.

The use of silica gel also eliminates the necessity of having high pressures, without the use of refrigerants, and without the need of complying with codes necessary to protect the public when large quantities of refrigerating liquids and gases are under pressure.

The three homes to be tested this summer are the first that will be completely air conditioned the year round with gas. Each house is heated in the winter with a gas warm air furnace that has met the approval requirements of the American Gas Association which heats, humidifies and cleans the air, circulating it by means of a fan.

The summer air conditioning equipment will supplement the gas heating furnace and the same duct system will be used with slight alterations in distributing the cooled and dehumidified air.

"While the residential field will probably prove to be the largest outlet for gas for summer air conditioning, there is an immediate field in many commercial and industrial applications," Mr. Milener said.

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The illustration above shows how we have solved the problem.

The cylinder is supported at the center line of the bore, permitting expansion in all directions with no change in alignment. Each fluid cylinder is mounted on two water-cooled saddles as shown. There are no supports on the bottom.

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More Regulatory Powers for State Agency In Bill Proposed by Texans

By Paul Wagner

N. P. N. STAFF WRITER

AN enforcement statute "with teeth in it" is proposed by substantial Independent operators to strengthen powers of the Railroad Commission of Texas, the state's oil conservation agency.

Among other things the law will require immediate hearings on court proceedings brought against proration.

The bill was proposed by J. D. Collett, Independent operator of Fort Worth, and Charles F. Roeser, of Roeser & Pendleton, Inc., chairman of the oil operators' Central Advisory Committee of Eleven for East Texas proration.

The proposed law would prevent temporary injunction being issued without a hearing. Injunction proceedings would have precedence over all other litigation in both trial and appellate courts and decision of the Court of Civil Appeals would be final.

In case the proration order is upheld, the proposed statute calls for the operator forfeiting enough of his allowable production to make up for any excess exploitation in a period of injunction.

Provision is also made to empower the railroad commission to prevent the "production of oil in Texas in excess of the current reasonable market demand for current use and consumption," on the ground that such excess would constitute waste.

A similar provision is contained in the first draft of the Oil States' Advisory Committee's proposed uniform conservation law for all producing states.

The Collett-Roeser proposal was made to the Texas legislative committee on oil, gas and natural resources at the close of the conference in Austin, May 4 and 5, called by Governor Sterling and attended by Cicero I. Murray, of Oklahoma, chairman, among other members of the Oil States' Advisory Committee.

Out-of-state delegates approved the proposed law as a step in their own program, which will be acted on further at Denver, Aug. 10. Groups representing legislative and executive departments of the various oil states are to be invited there.

The interstate conferees at Austin unanimously indorsed the principle of a uniform conservation law for oil states and study of a compact among states looking toward stabilization of the petroleum industry.

ON MOTION of Senator Walter Woodul, of Houston, the group voted, "that we go on record as favoring any practical and uniform conservation act in the various oil producing states, ... also, if it can be worked out, an interstate compact looking to the better enforcement of the uniform conservation act."

Texas legislative committee members declined to indorse without study, either the Oil States Advisory Committe's proposed statutes, or the measure presented by Messrs. Collett and Roeser. The conferees were told by Ed A. Landreth, Fort Worth Independent operator, that all producing sections of Texas, except the Panhandle and East Texas, indorsed the Collett-Roeser proposal, including many operators in the last mentioned areas.

From East Texas, however, a new rumble of discontent was forthcoming. Carl L. Estes, Tyler, secretary of the East Texas Lease, Royalty & Producers Association, said introduction of any legislation designed to tighten the machinery of proration in the state would be a signal for resumption of hostilities in the Sabine Uplift region. The East Texas controversy on proration is temporarily ended in a truce that brought proration May 1, to last until July 1, beginning at 160,000 barrels allowable production daily.

Estes and his anti-prorationist group, composed mostly of lease and royalty owners, described the truce as "an experiment," during which injunction proceedings would be held in suspension under court approval.

Tom E. Cranfill, Dallas, president of the Independent Petroleum Association of Texas, and a principal in the Pilot Oil Co., operating in the Sabine Uplift region, issued a statement protesting legislative action. He referred to what he called "an eleventh hour effort" in the legislature to make proration more stringent and charged it was a violation of the truce between prorationists and anti-prorationists in East Texas.

"We don't want any such measure railroaded through until the Independent producers have had an opportunity to study it," he declared.

BESIDES the provisions made for dealing with court injunctions expeditiously and the setting up of reasonable market demand through state agency, the Collett-Roeser bill gives the state railroad commission authority, when curtailment of production in a given pool is necessary, to order restrictive measures and the bill states that it shall be no defense against such an order that the

individual producer violating the order is not producing wastefully in his own operations.

The unnecessary waste of gas or the gas energy of an oil pool would be prohibited. It is not the intention, however, to require repressuring of an oil pool, nor to require owners of separate properties in an oil pool to unitize them under one management.

The Oil States' Advisory Committee's so-called uniform conservation measure, to be studied further at the Denver conference, calls for provisions against waste, ratable takings of crude, common purchases from producers, prohibition of price discrimination by purchasers, equitable proration in times of overproduction and authorization for unit development.

Regulation of unnecessary drilling is contemplated after further discussion looking toward that phase of operations.

Sponsors Say Texas Bill Would Provide Industry Relief

HOUSTON, May 7

AFTER a conference of opposing forces on proration legislation at Austin May 6, participants left the meeting determined to pursue their respective courses.

A bill sponsored by substantial Texas Independents to strengthen the railroad commission's oil conservation powers and tighten the law governing court injunctions against proration was introduced by Representative A. M. Howsley.

It will have the backing of Governor Sterling, Attorney General Allred and the railroad commission. Judge T. F. Hunter, president of the North Texas Oil & Gas Association, made up largely of Wichita Falls district producers, said he was not for the bill as written but would favor it if amended to place similar restrictions on crude purchasers.

Judge Charles L. Brachfield, Henderson, president, and Carl L. Estes, Tyler, secretary, of the East Texas Lease, Royalty & Producers Association, took the position that legislative moves constitute violation of their truce with prorationists in the East Texas situation; notwithstanding the bill offered to the house by Representative Howsley is of statewide application and independently sponsored.

Independent operators sponsoring the bill issued a statement signed by Ed A. Landreth, Landreth Production Co., Fort Worth; Charles F. Roeser, Roeser & Pendleton, Inc., Fort Worth; J. D. Collett, individual operator, Fort Worth; Jack B. Roberts, Roberts Oil Co., operating in East Texas; P. B. Flynn, Reno Oil & Gas Co., Wichita Falls; John F. O'Donohoe, Petroleum Producers Co., Wichita Falls; E. H. Eddleman, American Refining Properties, Wichita Falls; E. R. Fain, Fain-McGaha Oil Co., Wichita Falls, and Ed Peterson and O. B. Anderson.

The Texas legislature two years ago, it was said in the statement, yielded to the solicitation of Independent oil producers and enacted the common purchaser bill providing for the ratable taking of oil by pipelines. That measure, it was said, did not contain adequate and necessary facilities and machinery for its prompt and proper enforcement. These facilities and machinery are provided in the present bill, it was asserted.

It was pointed out in the statement that the common purchaser bill was supported by Tom E. Cranfill who is quoted in regard to the present bill as saying, "We do not want any such measure railroaded through until the Independent producers have had an opportunity to study it."

Attempt to "railroad" the present bill is disclaimed by its sponsors who declare they are seeking only to bring immediate relief to those operators who need and deserve it.

The sponsors charge Mr. Cranfill with having violated and defied the common purchaser act. In reply to Mr. Cranfill's assertion that he does not know who is behind the present bill they say it is sponsored by hundreds of Independent operators.

Wilbur May Not Attend Denver Conference

WASHINGTON, May 11.—Although greatly interested, Secretary of the Interior Wilbur does not expect to attend the meeting of representatives of the executive and legislative branches of oil state governments. That does not mean that under no conditions would he go to Denver next August. It means, however, that he recognizes that the proposals to be considered there are wholly state matters.

Northcutt Ely, Secretary Wilbur's executive assistant, upon the request of the Oil States' Advisory Committee, has been conferring with members of that committee not because of his place in the federal government but because the state compact plan which the committee has been considering is a matter with which Mr. Ely is familiar. In fact he is credited with being the author of the state compact document issued in 1929.

Secretary Wilbur holds that the making of a state compact is something which the states and the industry must undertake if it is to be undertaken at all. His thought is that the federal government, as the owner of oil lands, has done everthing possible for the conservation of oil and gas by the control of drilling and unit operation for the prevention of waste.

The secretary thinks the making of a compact or compacts is particularly incumbent on the industry because it is drowning itself with overproduction. Unless there is control and consequent stabilization he believes Congress will undertake control with consequent price fixing.

Mr. Morgan Discusses Oil

"J. PIERPONT MORGAN, head of the J. P. Morgan and company, international bankers of New York City, and principal stockholder in the Continental Oil Co. of Ponca City, with Daniel J. Moran, head of the Conoco, has been on a tour of the Continental properties in Texas and New Mexico."—News Items in Tulsa World.

* * *

With that start, Ellick Botts, consulting pumper, Gray Horse, Okla., leaped into his IVd and traversed the few miles between the place he does his consulting and the Ponca City offices of the Continental. At least, that was what he was instructed to do. Upon his return, he submited the following as the result of his interview with Mr. Morgan:

I was ushered into the presence of Mr. Morgan, began Mr. Botts, after a wait of only a few minutes. With him were Mr. Moran, all the directors of the company and a man named Arthur Lawrence, who is said to be an Indian chief.

The offices are quite spacious and present a scene of almost oriental splendor. On the desk was a box of some peculiar cigarets, apparently the property of Mr. Moran. I mentioned this fact merely to indicate some plausibility in the rumor that Mr. Moran gets his inspiration and his never failing energy from some source outside of himself.

Mr. Morgan, I found looks nothing like his pictures. He lacks the big mustache which I had been led to believe he wore and he was much bigger than represented—somewhat bigger than Dempsey or Ruth and much better and younger looking. Personally, I should always like to be friendly with him, especially if there were no witnesses.

He and the entire party made me feel at home, giving me rather a central position in the room and pressing upon me a fine Cinco cigar. (Adv.) Mr. Morgan began with, "Well, Mr. Batts, what can I do for you?"

A. Botts is the name Mr. Morgan, and I am here in my capacity of associate editor of the Mid-Continent Skyline, to talk to you about the oil business. On your trip did you get any ideas that we should pass along to our readers?

Mr. Morgan: Well, Mr. Box, I really am not here to study the oil business. I came down to be made a colonel on Gov. Bill Murray's staff.

Me: You are quite familiar with industry, Mr. Morgan, and I want to ask you whether you have drawn any conclusions as to the relative efficiency of this and other large industries.

Mr. Morgan: Mr. Betts, since I have visited only the properties of the Continental, I hardly think it would be proper for me to answer that question.

Me: Botts is the name, Mr. Morgan, and I wish you would stop calling me other things. What I want to know, as one man to another, is whether you have found any way of making Continental stock go back up to the place where some of us investors think it should go.

Mr. Morgan: Well, Mr. Botts —I have it right this time—all I can say is that if Mr. Moran and these directors will pay due regard to their overhead, or their underfoot, increase reserves and the book value of the stock, set aside a due amount for amortization, depletion and depreciation as well as intangible costs, eliminate current and contingent liabilities and turn everything else into current assets without weakening the cash position and pay a substantial dividend without drawing upon profits or surplus, the trick will be turned. This may take some time but, as you know, "art is long and time is fleeting." How does that sound?

Me: Terrible. It doesn't make any sense.

Mr. Morgan: Then this is unquestionably an Interview With a Financier that will rank as a masterpiece. I am sorry, Mr. Butts that I cannot give you any more time, but I am supposed to inspect the refinery, which is quite a joke to me. I'd rather be playing the clarinet.

* * *

As we said, Mr. Botts submited the foregoing as his interview. Then we faced him down with another news item from the Tulsa World, as follows:

"Report from West Texas that J. P. Morgan, of New York, principal stockholder of Continental Oil Co., was, with Dan. J. Moran, head of the Conoco, on a tour of the Continental properties, is incorrect. Mr. Morgan is in Europe, but a party of personal associates and representatives of Mr. Morgan are on tour."

Mr. Botts, under severe grilling, or flaying, finally admitted that he had not seen Mr. Morgan at all but, as he had understood that nearly all the interviews of today are the work of "ghost" writers, he saw no impropriety in turning spook for this occasion. Anyway, he contended, his interview made as much sense as most of them. Upon that basis, Mr. Botts

scored a point and sold his "scoop."

* * *

Otto D. Donnell, president of the Ohio Oil Co., made a tour of the East Texas fields the middle of April. He said the territory was so big and so crowded that when Walter W. Fleming, president of the Marathon Oil Co., Ohio subsidiary, attempted to meet the Donnell party, he used up two full days finding them.

* * *

Marvin Lee, geologist, was recently elected president of the Kansas division of the Independent Petroleum Association of America. Besides continuing their efforts in behalf of an oil tariff, the Kansas division members are working to bring about a more favorable tax situation for Kansas oil industry.

* * *

Because "Alfalfa Bill," the governor of Oklahoma, vetoed the appropriation, Oklahoma will have no state geological survey for two years. The same thing happened several years ago when another governor who disbelieved in hifalutin' things such as geology, withheld the money. The state survey, under the direction of Dr. Charles N. Gould, has made a fine record in promoting the development of Oklahoma's resources. Much information concerning their location and value has been made available to the public.

* * *

Well, the flamboyant Jack Walton, whom the federal court will presently put on trial for alleged misuse of the mails in promoting an alleged oil company, was decisively turned down by the electorate of Oklahoma City in his campaign for mayor. Things seem to be looking up. Texas retired the Fergusons, Chicago its Thompson and now Oklahoma City—and if this be treason, make the most of it.

* * *

Kenneth Wickett, superintendent of the Barnsdall Oil Co.'s southern division, whose headquarters have been in Wichita Falls, has resigned and will devote his time to the management of his extensive personal interests. Mr. Wickett, who was with the Barnsdall for five years, is a son of the late Fred H. Wickett, one time head of the Dixie Oil Co. and later of the Pan-American Petroleum & Transport Co., after that company had been acquired by the Standard of Indiana. Associated with Mr. Wickett is Burr McWhirt, formerly of the geological and engineering departments of the Shell Petroleum Corp.

* * *

Died: In the veterans hospital at Muskogee, Raymond B. Kessler, one time of the legal department of the Carter Oil Co. and in more recent years engaged in drilling contracting and leasing with his brother, Fred Kessler. He is survived by his widow and two children.

* * *

G. J. Neuner, for five years a member of the legal department of the Barnsdall Companies, Tulsa, has resigned to be associated in the same capacity with the Panhandle Eastern Co., subsidiary of the Missouri-Kansas Pipe Line Co., which in turn is dominated by the Columbia Gas & Electric Co. Mr. Neuner will be in the Kansas City offices.

* * *

Mr. Ellick Botts,
Consulting Pumper,
National Petroleum News,
Cleveland, Ohio.
Dear Ellick:

Seein' that everybody is giving advice and no one following it, maybe a little dope from out here in the sticks would be "pertinent" to the subjeckt and might help some of these here big shots to get their feet on the ground, and bring this oil business out of the kinks.

I've been reading in the papers where in the whole United States, stocks of crude and refinery products (above ground) amounted to 246 days supply, which is identical to this same time last year, and if I remember correctly is some lower than in previous years. Now what gets me is this—these guys who are shivering with fright because of the terrible over-stocked situation, looked at these same stocks a couple or so of years ago and announced for publication, "We view with alarm the lack of known oil reserves in this country to keep up with the ever-increasing demand for petroleum products. We have today less than a year's supply of oil in storage, etc., etc." Same stocks and same guys!

Seems like everybody is scared of everybody else. I'll tell you what it is—sh-sh—It is these potentshulls. They might get loose!

These sales fellers snoop around to see what the others are doing—sometimes some guy with a big truck slips around at night and hauls a load of gas which they forget to tax—and for several reasons the price of gas gets cut—it becomes necessary to meet competition. The cry goes around "meet competition regardless." Boy, howdy—the race is on.

I never yet went to the grocery store and had the grocer say, "Here, take home these big oranges for 10 cents a dozen—they are paying us to haul these out of California." But a few days ago I went through Shawnee town where the gas price was posted at 9½ cents. Just figure it out; 5 cent tax leaves 4½ cents for handling, freight, refining, and crude cost.

Says I; let's settle this scientific like—make a big ring and put all the oil company agents in there, and let them do all their fighting right there and get it out of their system—then come out and act like men and put a living price on oils and gas. Why, Ellicks, these birds will fix it so there is no money for consulting pumpers and other working men like you and me.

If there is any real reason for all this business of giving stuff away I'd like to hear about it. Why can't these big shots study their business so as to meet expenses and a living profit, rather than always to meet competition?

Who is this "competition" referred to? Pull off his mask and it is some poor boob who is just as scared as he. Never trusting nobody and always worrying about S h e r m a n! Didn't he say, "War is hell"? Let's cut out the war, and get down to business.

Just writing to you, Ellicks, cause we both belong to the pumping fraternity, and I believe you has affluence.

Sincerely yours,
Bright Stock Bill

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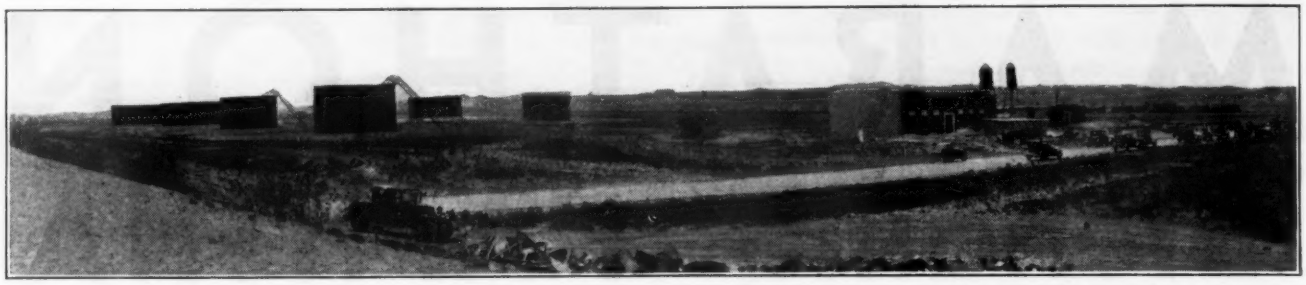


Great Lakes gasoline pipeline terminal at Kansas City now nearing completion. Tank car loading racks are in the background and pump station at the right

Iowa Removes Last Bar to Completion Of Great Lakes Gasoline Line

By Allen S. James

N. P. N. STAFF WRITER

KANSAS CITY, May 8

THE Great Lakes Pipe Line Co. now can complete that portion of its gasoline line from Kansas City north to Des Moines and Minneapolis.

The last barrier was removed May 1 when the governor of Iowa signed a bill passed in the closing session of the legislature, which permits pipelines to pass under highways in that state.

Iowa previously had had little experience with pipelines and no laws with reference to them had been enacted. The Prairie Pipe Line Co. had a crude oil line running through the southeastern part of the state, but this line had been there before the era of modern highways.

It was necessary to get some form of legislation and the Great Lakes officials spent considerable time along those lines. The construction work was not delayed, however, except where the line crossed the highways. There were about a dozen gaps of approximately a mile each which remained to be closed as soon as the bill became a law.

The line south from Barnsdall, Okla., has been completed, connecting with the Mid-Continent Petroleum Corp. plant at West Tulsa, the Phillips Petroleum Co. and Barnsdall Refineries, Inc., plants at Okmulgee, and the Pure Oil Co. plant at Muskogee.

Work has started on the branch line to the Skelly Oil Co. refinery at El Dorado, Kan. The line eastward from Des Moines to Chicago and Milwaukee has been laid to the Illinois line. Work has not started as yet on the branch line to Omaha.

Officials estimate the entire system will be in operation by July 1, with the possible exception of the Omaha lateral which may not be in operation before Aug. 1.

Although the line has been in operation from Ponca City to Kansas City (Fairfax) for some time, only one grade of gasoline has been delivered. This is the summer grade which the member refiners sell as their regular brand of gasoline. The grade of gasoline which will be used for blending stock for Ethyl gasoline probably will not be turned into the line for several weeks, due to a delay in construction of Ethyl blending plants at terminals. Members refiners of the pipeline company continue to ship their Ethyl gasoline via tank cars.

Little thought apparently has been given to the introduction of "blue" gasoline. While all members of the line are marketing a "blue" gasoline, the revolutionary marketing policy is too new for any decision to be reached with reference to its movement via pipeline. This grade could be shipped ready for distribution or uncolored and the dye added at terminals.

The tankage and loading rack at the Kansas City terminal have been completed. Work is progressing rapidly on the pump station.

The line has not been operated at a capacity sufficient to determine the ultimate economy or efficiency of the plan. Several of the member companies have the bulk of their gasoline distribution farther north and east and have had little occasion as yet to make use of the system.

No trucking is done either by the pipeline company or by the member companies who have used the line thus far. The gasoline is loaded into tank cars at the terminal and shipped on short haul freight rates via rail to nearby bulk plants. In the case of distribution in Kansas City, the gasoline is moved in tank cars on a favorable switching rate to bulk plants of member companies.

Pipeline officials, it is understood, do not favor trucking from terminals provided satisfactory short-haul freight rates can be obtained. Several conferences have been held with the carriers on local rates. It

is doubtful if any trucking will be done from any of the terminals for distribution within the adjacent cities. In almost every instance, switching charges are sufficiently low to make trucking unnecessary.

The tank farm at the Kansas City terminal is being used now primarily for water storage, since the line is not being operated at anywhere near its capacity. It was found through experience in testing and washing the first section of the line that even water was expensive and the water accordingly was saved in the storage tanks for use in testing the other sections of the line as they are completed.

Tank cars on the Kansas City loading rack tracks are mostly those of Continental Oil Co., Barnsdall Refineries, Inc., and Mid-Continent Petroleum Corp. Continental and Barnsdall supplied the bulk of the gasoline with which the line was filled from Ponca City to Kansas City. The Mid-Continent was understood to have made one tender of 50,000 barrels.

It will not be until the completion of the section to Minneapolis, that all of the companies will begin to reap whatever benefits there are in using the line. The bulk of gasoline distribution for virtually all member companies is in the territory farther north and east.

On an adjacent tract of land, meanwhile, the Phillips Pipe Line Co. is constructing a tank farm for its gasoline pipeline from the Texas Panhandle to St. Louis via Kansas City.

The line has been completed to Kansas City. The Wichita-Kansas City section was under test May 7.

Completion of the line to Kansas City permits Phillips to move natural gasoline to its refinery at Kansas City; to move motor fuel from its Borger, Tex. plant to Kansas City and thence via the Great Lakes line northward, and to move gasoline from its Okmulgee refinery to Kansas City via the Great Lakes line and thence north by the same line, or to St. Louis via its own line, and will also permit it to move gasoline from its Kansas City plant either north or east to St. Louis.

I. C. C. Believes Gasoline Pipeline Rates Violate Commerce Act

WASHINGTON, May 11

TROUBLE for pipelines carrying gasoline, which, in their tariffs, publish rates for transportation beyond their terminals, is indicated by information imparted to them to the effect that the men in the service of the Interstate Commerce Commission dealing with the fourth section of the Interstate Commerce Act think that that part of the law applies to the pipelines. They believe the pipelines are required to observe the long and short haul and the aggregate of intermediates parts of that section as strictly as the railroads.

The long and short haul part of the act says that a carrier may not publish a lower rate for a longer haul than for a shorter haul over the same route in the same direction; nor have a through rate which is higher than the aggregate of intermediate rates.

Information as to the thoughts of the commission's fourth section men has been given to representatives of the Great Lakes and the Phillips pipeline companies. The fact that it had been passed along to them came out within the week in connection with an application of the Phillips line for permission to "correct" its rates, now in effect from Borger, Texas, to Wichita, Kan., and to publish new rates, effective about May 20, for the extensions, now nearing completion, to Kansas City and East St. Louis.

The Phillips company, without disclosing what it had in mind as to rates, asked for permission to make the corrections and extensions, on a 5-day notice instead of the 30-day notice required by statute.

The application was denied because of its lack of details. The regulating body requires definite information as to what is proposed, with evidence that what has been proposed has been imparted to competitors and that the latter have no objection to the disregard of the 30-day notice part of the statute.

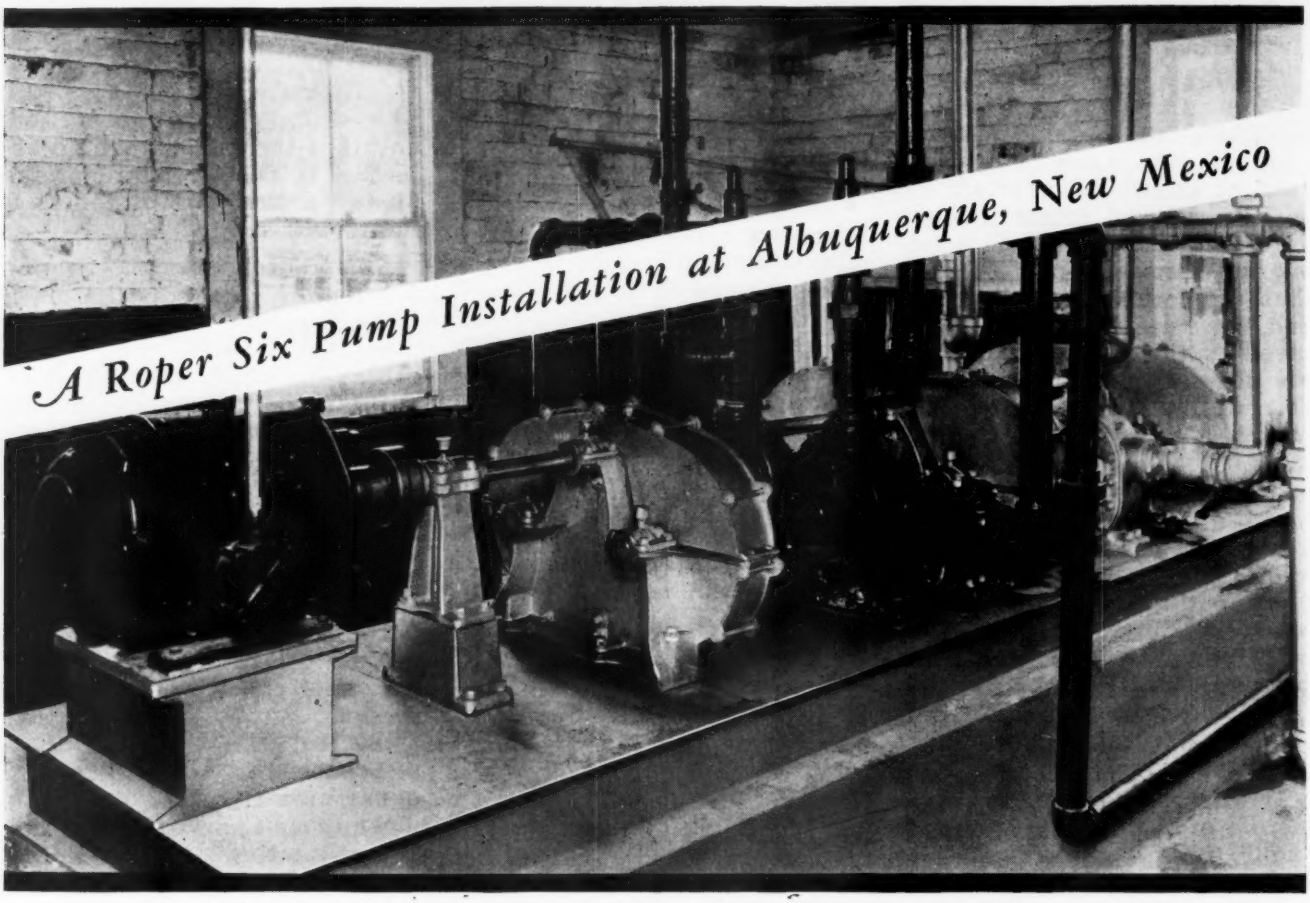
Commission fourth section men believe both gasoline pipeline companies, because of their "varying proportionals" applicable on hauls in connection with further transportation by railroad and trucks have violated both parts of the fourth section.

If the gasoline pipeline companies revise their tariffs in such a way as to remove fourth section disregards or departures nothing more will come of the matter. But if they think they are not violating the fourth section, either because they think it does not apply to them or because the facts fail to show departures from the rules laid down in that part of the statute, the regulating body will probably institute an investigation to determine the matter in a formal manner.

Relief from the provisions of the fourth section may be obtained by application to the commission and a showing that there are good reasons, in a transportation sense, for disregard of the fourth section. Millions of such rates are in effect on the railroads, generally because the regulating body is of the opinion that a railroad having the long line between two points, should be permitted to make rates to common points as low as the rates of the short line, without cutting the rates at intermediate points where there is no competition.

Pipelines making rates to be used in connection with railroads and trucks are so new that there are no guides to govern one desiring to arrive at a conclusion as to whether a given rate is or is not in violation of the fourth section. As a rule no relief is given for rates the sums of which are lower than a through rate.

ROPER PUMPS FOR BULK STATIONS



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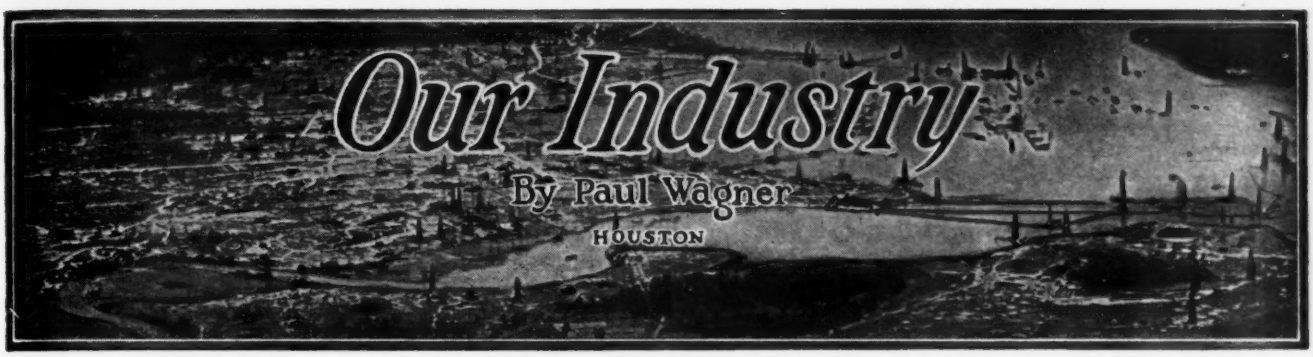


JAMES P. EVANS, Shreveport oil operator and owner of extensive leaseholds in East Texas, was one of the pioneers of the Gregg county division of the Sabine Uplift shoreline producing region, in partnership with J. K. Wadley of Texarkana. After selling 816 acres in the Lathrop discovery area to the Tidal Oil Co. of Texas, several months ago, Messrs. Evans and Wadley were left with nearly twice that amount of acreage inside the inferred producing limits of the district.

In their deal with the Tidal, Messrs. Evans and Wadley were paid $100,000 cash; they are to get $200,000 additional out of one-fourth of the oil produced; and the Tidal is to spend $400,000 on development before subsequent operations go on a 50-50 basis.

* * *

C. F. Vincent, formerly at Oklahoma City for the Byron Jackson Co., has been transferred to East Texas as sales engineer. He was succeeded at Oklahoma City by Byron M. Landis, formerly of Los Angeles.

* * *

E. A. Zust has replaced Leonard Lee as chief engineer at the Houston ship channel refinery of The Texas Co. Mr. Lee was recently transferred to the Providence terminal. Mr. Zust had been previously at New York.

* * *

The recent transfer of J. S. Worden to the Lawrenceville, Ill., plant of the Indian Refining Co. was followed by the appointment of G. T. Stevens to succeed him as superintendent of The Texas Co.'s Houston ship channel refinery. Mr. Stevens was formerly Amarillo Works superintendent.

David E. Day, refinery executive of the Richfield Oil Co. of California, has completed an extensive investigation of conditions in East Texas and returned to Los Angeles headquarters.

* * *

M. C. Israelsky is now micro-paleontoligist for the Union Gas Corp. at Houston.

* * *

C. R. Vinton is now Arkansas producing district superintendent of the Pure Oil Co., with Leo Hughes as office assistant. L. L. Haines replaced Mr. Vinton at Oilton, Okla., and Carl Douglass was promoted to Sapulpa district superintendent.

* * *

David Donoghue, consulting geologist of Fort Worth, who has been technical advisor to the Central Proration Committee of Texas since its inception last year, is returning to private practice, May 1. Mr. Donoghue, in addition to purely technological work, gained wide executive experience as land and geological director of the Texas

James P. Evans

Pacific Coal & Oil Co.; as a member of the executive staff of Tidal Oil Co., subsidiary of Tide Water Oil Co.; in the old Marland Oil Co. of Texas; and previously in the geological department of Gulf Production Co.

* * *

W. C. Goza, sales division manager of the Walworth Co., at Houston, spent last week in the new Sabine Uplift oil producing region of East Texas.

* * *

Died, Guy V. Lewis, 40, owner of the first oil well in Smith county, East Texas, which he drilled on land owned by his mother, Mrs. Alice Cook. Pneumonia was the cause of death. Burial was at Arp, near the old homesite and within plain sight of scores of derricks now marking Sabine Uplift region development.

* * *

Fred W. Dallas, Gulf Coastal production superintendent of the Pure Oil Co., with Houston headquarters, was for many years connected with the Rycade Oil Corp., before its dissolution several months ago. He is widely known in southwestern production circles.

* * *

O. L. Brace, petroleum engineer and active head of the Corana Petroleum Co., a close partnership operating in Texas and New Mexico, is now making headquarters at Tyler for Sabine Uplift region work.

* * *

Herbert A. Fredrichs, formerly of The Texas Co.'s comptroller department at Houston and more recently connected with the refinery division at Port Arthur, has been assigned to the position of export representative at Lagos, Nigeria, West Africa.

Ritz-Canton Area Holds Possibilities For Sizeable Viola Lime Pool

By Lawrence E. Smith

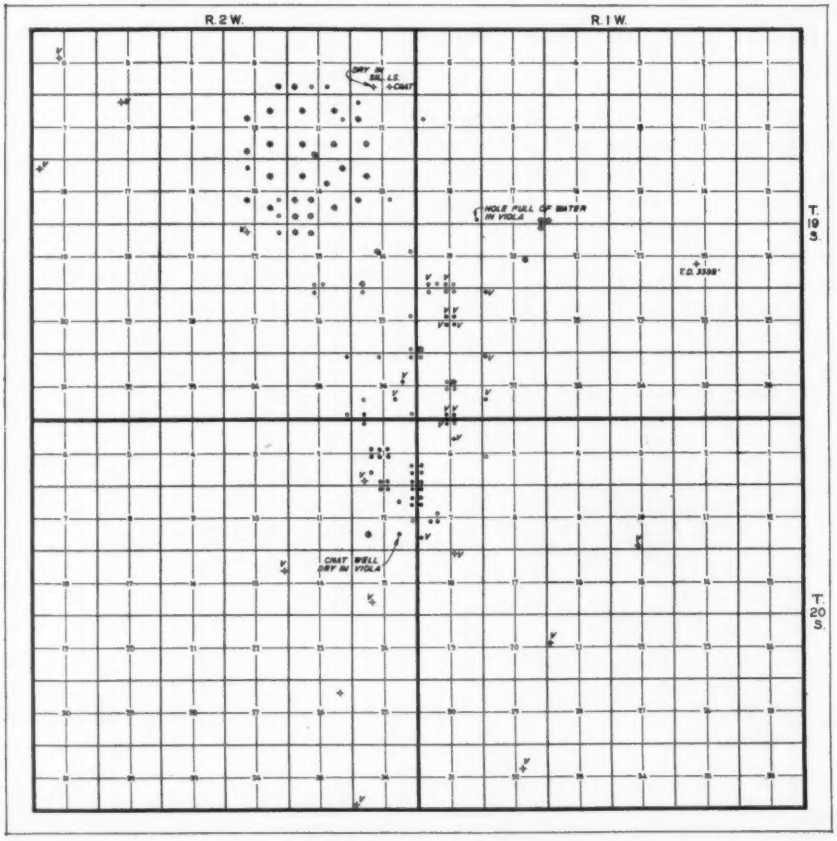
N. P. N. STAFF WRITER

WICHITA, KANS., May 9 S OF May 1 potential production of the Ritz-Canton area of McPherson county, Kan., was being carried at 56,998 barrels per day. Subjecting this figure to all the criticisms which attach to potentials arrived at by less than a 24-hour continuous flow—these are 12-hour flows multiplied by two—it is apparent that the area is still one of importance.

Of the total rating on the area, 20,856 barrels were assigned to the Viola lime horizon and the rest to the Chat, which is a "trash" zone on top of the Mississippian and is a persistent producer of oil and gas throughout the south central part of Kansas. Never rated as of great economic importance elsewhere, the Chat is proving to be worthy of more consideration in eastern McPherson county.

In other areas some wells of big initial production have been completed in the Chat but they almost invariably were ruined quickly by water. Many of the Chat wells in the Ritz-Canton area make water, but because of the proration policy which prevails, it is believed by several operators that a far greater recovery of oil will finally be had than would be obtained under open flow conditions.

The accompanying sketch map shows the areal extent of production, beginning with the Decker gas field in Twp. 19S-2W and taking in the Ritz-Canton oil field in that and adjoining townships. Wells marked with a "V" are producing from the Viola lime, which is currently thought of as being more important than is the Chat production. It is now defined north and south to have an extent of some four miles and its east-west extent, at the widest point, is nearly one and one-half miles.



The Ritz-Canton area of McPherson county, Kans. Wells marked with "V" produce from the Viola lime

The Viola lime, of Ordovician age, is a prominent marker formation throughout the Mid-Continent, lying just above the Simpson series, which contains the Wilcox sand. The latter formation is missing in the Ritz-Canton area, although Simpson material has been found in some of the wells.

The Wilcox was productive in the Voshell pool of McPherson county, southwest of the Ritz-Canton and a great deal of the production in the Voshell came from the Siliceous lime, underlying the Wilcox. This formation is present in the Ritz-Canton area and some hopes are held that it may produce. There has not yet been a test to the Siliceous except outside what is now considered to be the area structurally favorable to produce.

In 23-19S-1W, as shown on the map, a wildcat was drilled into the Siliceous. This test was put down by Milligan, Henderson, Holden and Darby Petroleum Co. It had a show of gas in the Chat, a hole full of water in the Viola and a similar result in the Siliceous, which was topped at 3529 feet and drilled to total depth of 3539.

Another Siliceous test was that shown in 1-19S-2W. Madison and others and Shell Petroleum Corp. were the owners. A small showing of oil was found

in the Viola and a hole full of water in the Siliceous, at 3569-72 feet.

The search for production in the Siliceous, however, will be allowed to wait. There are many locations considered certain of production in the Viola. As now understood, structural closures indicate Viola production yet to be found northwest of that area now proved and possibly extending over into the Decker gas field, in the northeast fourth of Twp. 19S-2W.

A failure in the Viola has been drilled on the southwest edge of the gas field, another three and one-half miles east in 18-19S-1W; between these there is room for considerable Viola development, if the conditions of structure and porosity satisfy the requirements for commercial accumulation of oil.

There is no particular rush about proving the scope of the field, as proration is severe enough to cause operators to hold back drilling as much as they can and still validate leases. Much of the acreage in this field was leased by the Shell Petroleum Corp. several years ago as part of the big campaign carried on by that company in leasing wildcat territory where structure had been determined by core drilling and otherwise.

The Shell last year established a policy of "farming out" its Kansas acreage; as a result many of the independent operators in the state are doing the drilling on Shell leases on overriding royalty arrangements, thus getting the benefit of the geological work done by Shell.

Currently, this is the most active area in Kansas. In Twp. 20S-1W there are seven wells drilling; in 20S-2W there are two. Twp. 19-S2W, the area of the Decker gas field, has 22 wells drilling and the next township east, where Viola lime oil production was obtained first, has 21 operations.

The Decker gas field produces from the Chat formation and at this time is rated as having total open flow of more than 500,000,000 cubic feet daily. Only a small percentage of it is taken, the Kansas Pipe Line Co., owned by the Studebaker-Insull interests, being the only buyer.

Wells completed in the Viola have ranged in initial production from 1500 to 3800 barrels on the basis of a 12-hour swabbing test. Few of them flow much production. The oil ranges in gravity, from 36 to 40 on the A.P.I. scale. The oil from the Chat falls a little lower in the gravity scale.

In seasons such as the present one, when a single well in the Oklahoma City field will show as much initially as all of the Ritz-Canton field, interest is naturally not very keen in the latter. Yet, to Kansas producers who are in the field or interested in acreage that appears to be in the money, it is quite important.

Even the Chat production, held in light esteem elsewhere, appears to be of considerable economic importance here. It is as tricky in one respect as it is in other Kansas areas in that a big producer may be offset by a dry hole or a very light well, but the accumulation seems to be much greater and, thanks to proration, the water is being held back and a much greater final recovery seems to be in order.

Oil Proration Counsel Dies at Okla. City

OKLAHOMA CITY, May 9.—Funeral services for Judge Frank P. Burford, who died after a two-day illness, were held here Friday. He was 47 years old and leaves a widow.

Judge Burford has been prominently identified with the oil industry of the Mid-Continent for several years. He was retained by a number of oil companies and on their behalf appeared in most of the court and corporation commission cases involving proration in Oklahoma over the past three years. He was the son of the late John H. Burford, chief justice of the Oklahoma territorial supreme court.

Active pallbearers were Myron Humphreys, John Adams, John H. Kane, vice-president of the Phillips Petroleum Co.; John H. Miley and Gen. Roy Hoffman. Among oil men who attended the services as honorary pallbearers were the following: W. S. Fitzpatrick, chairman of the board, Prairie Oil & Gas Co.; James A. Veasey, general counsel, Carter Oil Co.; Ray M. Collins, chief proration umpire of Oklahoma; Burdette Blue, vice-president and general manager, Indian Territory Illuminating Oil Co.; R. L. Gordon, vice-president, I. T. I. O.; Fred S. Cook, superintendent land department, Prairie Oil & Gas Co. and Harry H. Smith, secretary, Mid-Continent Oil & Gas Association.

Gulf Coastal Operators Form Advisory Group

HOUSTON, May 7.—Gulf Coastal oil operators organized an advisory committee of eleven at a Houston meeting, May 2, to further the work of getting South Texas salt dome district production within the railroad commission allowable of 140,000 barrels daily. The Gulf Coastal district is now producing approximately 155,000 barrels daily, but has been cut from a maximum of more than 190,000 barrels daily since proration was inaugurated last fall.

R. H. Hargrove of the United Gas System, Houston, was elected chairman of the committee, and Joiner Cartwright, Sun Oil Co., Beaumont, secretary. Other members are Fred Sealey, The Texas Co., Houston; Dave B. Harris, Humble Oil & Refining Co., Houston; W. A. Belstrom, Mills Bennett Production Co., Houston; James Hutcheson, Rio Bravo Oil Co., Houston; Joe Russell, Gulf Production Co., Houston; George E. B. Peddy, the Humphreys Corp., Houston; T. F. Rothwell, Yount-Lee Oil Co., Beaumont; Gillette Hill, Moody-Seagraves-Morgan Co., Houston; L. A. Layne, the Layne-Texas Co., Houston.

Chief Supervisor R. D. Parker of the railroad commission's oil and gas division called the meeting to order and H. F. Montgomery, Houston oil lawyer, presided until the committee organization could be perfected. Chairman C. V. Terrell of the railroad commission attended.

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Kansas Chat Production Benefited By Proration Restrictions

By William F. Lowe
N. P. N. STAFF WRITER

TULSA

THE Chat production of Kansas under present production methods has a greater significance than ever before. A new well bottomed in this horizon is no longer "just another Chat well," but is looked on with considerable respect due to the recoveries that are being obtained by the practice of slowing down production. Some of these methods are the result of optional moves, but enforced reductions due to proration are responsible for much of the beneficial effect.

As a producing horizon the Chat has been one of the most inconsistent in the Mid-Continent, with a marked tendency to produce water early and often. For this reason the value of wells drilled into it have for years been depreciated. Production curves of such wells have usually shown a quick decline and early water incursion. This is partly due to the more or less wide open flow methods of the past and partly to the character of the pay itself.

The Chat formation is really an erosional zone of lenses, varying in thickness between 35 and 130 feet, and is logged at the base of the Pennsylvania series. It is found over much of western Kansas, though in any number of wells it does not appear at all. Composed of "chat" pebbles, red and green shales, and fragments of limestone, it represents the material of several different ages, and because of its heterogeneous character it has a high porosity.

An explanation of its erratic production records is suggested by its position in the section over a wide area. Though it always appears at the base of the Pennsylvanian sediments, it is seldom found overlying the same stratum of the earlier beds. This is due to the great erosional periods that preceded its deposition. The regional dip of the older rocks is southeastward into Oklahoma, and the Ordovician strata rise to the northwest across the state until even the Pennsylvanian beds, which rest directly upon them, in this area, thin out considerably.

The geologic history indicated by these facts is either a series of pre-Pennsylvanian uplifts followed by long periods of erosion, or the deposition of the earlier beds in overlaps against the old land mass. The alternate advance and recession of the seas during the pre-Pennsylvanian period would have resulted in such overlaps in beds of the section from Simpson to, and including, the Mississippi lime. This interpretation is the most generally accepted, for few geologists believe that the entire section was deposited over the old eroded surface of the Arbuckle in the western ranges of the state.

IN accepting this theory of the early history of the area in which the Chat production is found, a series of more or less upturned edges of the pre-Pennsylvanian beds, between the normal section as found in the eastern part of Kansas and the ridges of the west, must be postulated. Unconformably and irregularly on this uneven surface, the erosional fragments of all these beds were deposited to form the horizon known as the Chat.

It is thought that the oil and water found in this erosional zone has migrated from the lower beds. This appears to be more or less of a certainty in the case of the former though it is possible that a large portion of the water may have been connate to the horizon. In any event, the stratagraphic location of the Chat is thought to be one of the principal reasons for its irregularities of production.

There are only two pools of consequence in the state where the Chat is the principal producing horizon, the old Welch pool in the southeast corner of Rice County, and the comparatively recent Ritz-Canton area of McPherson County. In the former, which was discovered in 1924, the recovery has been approximately 7000 barrels per acre.

ALL things considered this has been a respectable yield though it is now being contended that more restricted production methods might very well have added at least a third more to the total. The water in the pool made an early appearance and has been a constant source of difficulty since, completely taking some of the wells in a short time.

There are any number of isolated small areas where the same thing has happened and the result has been a rather unsavory reputation for the Chat as a producing horizon. In the Schurr pool, on the west side of Rice County, this pay was almost a complete failure and the wells were carried further to the Siliceous lime.

In certain areas of the Ritz-Canton pool there were several similar instances and wells were drilled on to the Viola lime, where a more consistent production was found. The major portion of the wells, however, are bottomed in the Chat, most of them having initials above 5000 barrels, and all have shown water in varying amounts early in their productive life.

An illustration of what can be done with wells in this hori-

zon is shown in the method used in the Shell Petroleum Corp., No. 1 Miller, located at the southern end of the pool. Shortly after its completion a little over a year ago, it began making water, and within 30 days this had increased to seven per cent. The well was producing at the rate of 18,000 barrels per day though its gas volume was less than 2,000,000 cubic feet.

A tapered string of tubing was run, the sizes used being 2-inch, 2½-inch and 3-inch, and the water content immediately dropped to two per cent though the well was produced at the same rate as far as fluid volume was concerned. The water volume of the total fluid produced since the well was tubed has not been above three per cent.

As a direct result of the record made by this well and the experiments made by other companies in the area, beaning and back pressuring were resorted to on almost every lease. All production has been slowed down even further by the proration schedule which allows but 12 per cent of the potential to be taken from any well. Between the two moves, the individual and collective proration agreement, there is little doubt in the minds of the operators that the pool is being assigned a longer life and a greater ultimate yield.

The smaller takings per well and the methods of obtaining even these amounts are particularly important in a pool of this type. The pay is known to have a fast water drive and the necessity of reducing its speed and utilizing its energy is recognized by the operators. Though many of the moves for slower production were made previous to proration, there is reason to believe that enforcement of the present proration schedule will bring a greater recovery than could be obtained under an optional program.

Rock pressures will be maintained, gas-oil ratios are being reduced and the water problem which has been so destructive formerly in Chat wells, is becoming comparatively simple. All of these results mean that lifting costs will be lowered, for the period of natural flow is prolonged. This last statement is all the argument that should be needed to keep proration in effect in this type of pool.

Osage Oil Payments Still Confused

TULSA, May 9.—Federal officials have reached no decision as to the steps to be taken in straightening out the question of payments for oil produced on Osage Indian lands. Several owners of the surface rights who acquired title from the Indians have asserted their right to the oil and gas also. They base their claims upon the original allotment act which was to expire on April 8, last. It was extended by Congress to 1958. The validity of the extension is challenged.

Considerable confusion now exists. Companies that purchase oil in the Osage have taken the position that they will pay in full, on May 12, the regular payment date, for the royalty and working interest in oil purchased up to April 8.

For the rest of April they will pay the royalty into the Osage agency but the owners of the working interests—the producers themselves—must make bond to indemnify the purchasing companies in the event the surface owners win. Otherwise, the working interest receipts will be impounded if the buying company continues to run the oil, a sacrifice of income that some of the producers are poorly prepared to withstand.

It is expected that the government will institute suit in some specific case soon, designed to settle at one time all of the adverse attacks on titles. The Osage agency describes the situation as one that is critical to the Indians, who are practically all dependent upon the oil and gas revenue. It is distributed on a share and share alike basis to all tribal members who were enrolled in 1907 or who have acquired headrights through inheritance.

East Texas Map Completed

Zingery Oil Map Co., Fort Worth, announces the completion of a plane table ownership map of the East Texas oil fields, the map covering portions of Smith, Rusk and Upshur and all of Gregg counties. Its size is 7 x 4½ feet and is on a scale of 2000 feet to the inch. It was made in co-operation with Hudnall & Pirtle, consulting geologists, and with the aid of aerial photography, field surveying and abstracting of records. Locations of both completed and drilling wells were surveyed.

Oil Scout Sessions Held in Dallas

DALLAS, May 11—"Eyes of the industry," from Texas, New Mexico, Louisiana and Arkansas, gathered in Dallas today for a two-day session of the National Oil Scouts Association of America. Robert R. Penn, vice president for production of the American Petroleum Institute and chairman of the Central Proration Committee of Texas, was the principal speaker.

Other talks were made by visiting scouts, including J. V. Adams of the Gulf Production Co., San Antonio, retiring president; W. E. Whitcomb, the California Co., Midland, chairman of the executive committee; J. E. Beall of the Gulf Production Co., San Antonio, secretary-treasurer; and J. H. Langston of the Sun Oil Co., Dallas, vice president.

After Monday sessions and a continuance of the business at hand Tuesday morning, the scouts were to hold their annual golf tournament the afternoon of the second day. A smoker, was planned for the evening.

Seeks Bids on Kettleman Hills Royalty Oil

WASHINGTON, May 9.—Secretary Wilbur has issued a call for bids on the government's royalty oil and wet gas to be produced from the North Dome of Kettleman Hills after July 1. Bids may be for a one, three or 5-year term.

The government now is receiving $2.57 per barrel on royalty oil from the field on a bid submitted a year ago. Current price for oil of like gravity in California is 35 cents per barrel. New bids are to be made on the basis of a premium over the price obtained by the Kettleman Hills North Dome Association.

Electric Power as Steam Plant By-Product At Sinclair's Wellsville Refinery

By L. R. Arnold* and O. F. Campbell†

Part 2

Combustion Control

THE low pressure boiler units are operated with Hagan mechanical combustion control. Each of the high pressure steam generators is operated with Leeds & Northrup electrical control, the control panels being shown in Fig. 5. Combustion control was selected by reason of the many advantages which are obtainable over manual operation of boiler units.

The rate of combustion in the high pressure boilers is kept constantly in accord with steam demands from boilers. The fuel feed and air flow are held directly proportional to steam flow by a diaphragm actuated rheostat operated from steam header pressure. Uniform steam header pressure, correct relationship between fuel and air and correct furnace pressures are therefore automatically obtained.

Maximum steam output from each boiler is always available, if desired, as a result of properly maintained combustion conditions. Boilers are made to operate uniformly and continuously with respect to each other, whether the ratings on each are equal or unequal. Furthermore, whether the boilers are operating at equal or unequal ratings, their rating relationship is automatically held at a constant ratio for various load demands.

For example, if one of several boilers should be operating on a different fuel from that of the other boilers, or on a poorer quality of the same kind of fuel, and it is desired either to increase or decrease the steam output, as the case may be, then it is possible to establish its rating with respect to the other

*Steam Engineer, Sinclair Refining Co.
†Combustion Engineer, Sinclair Refining Co.

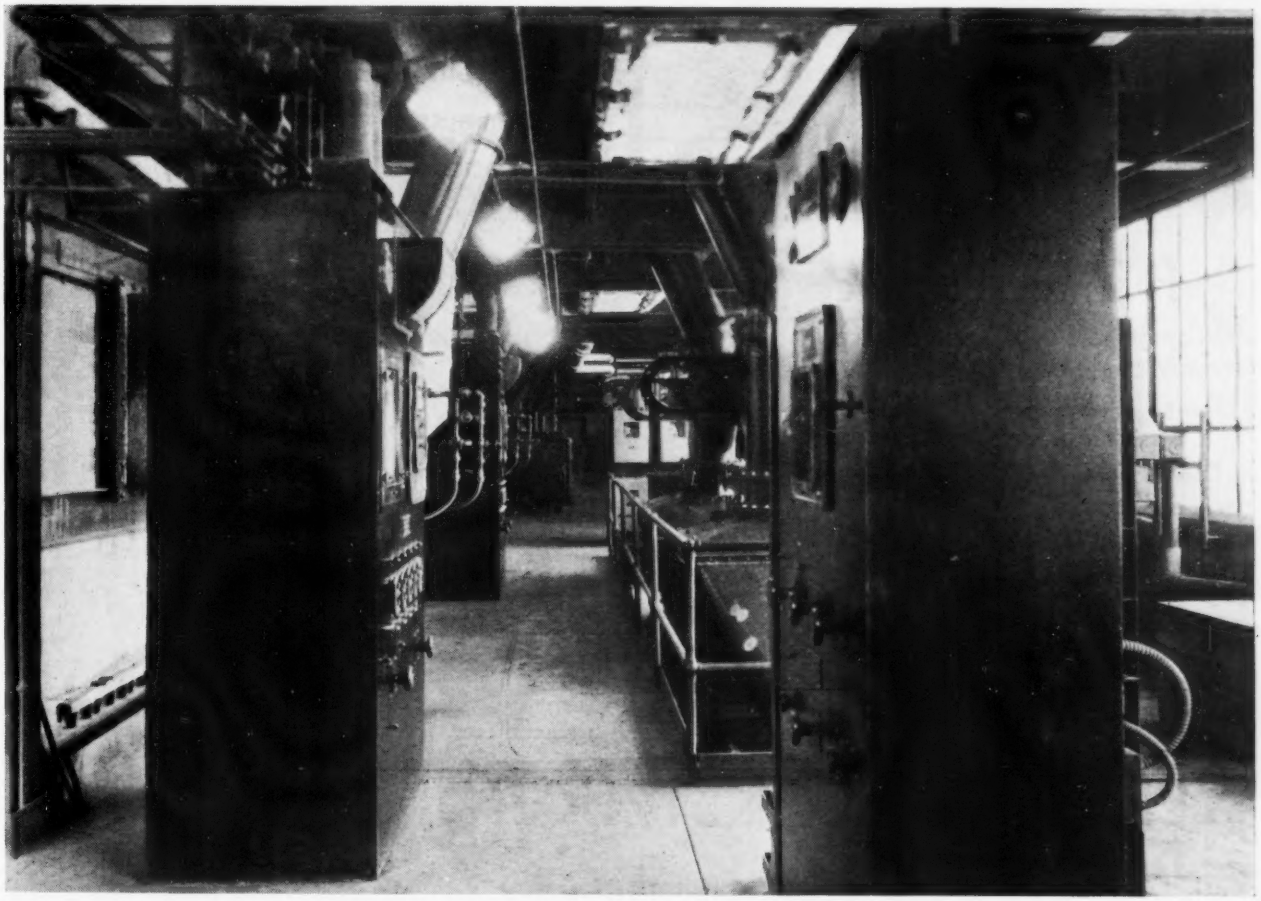
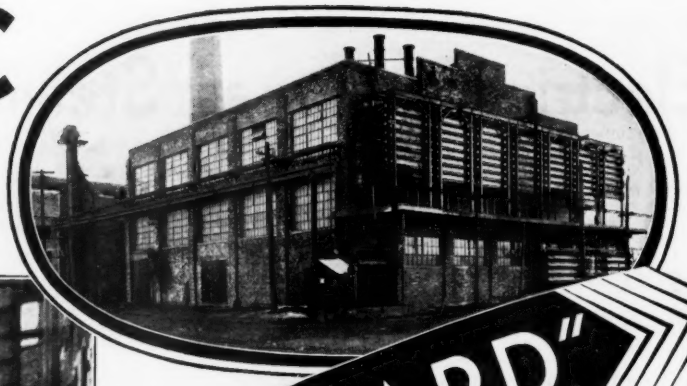


Fig. 5—Firing aisle in front of high pressure boilers show position of control boards containing meters and combustion control operating units

SULFURIC ACID PLANT



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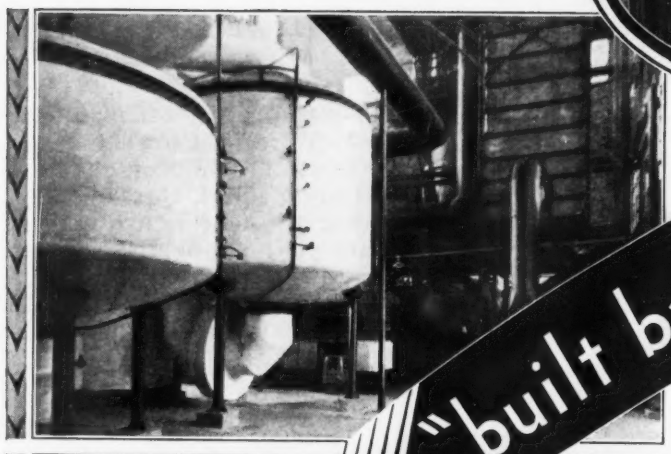

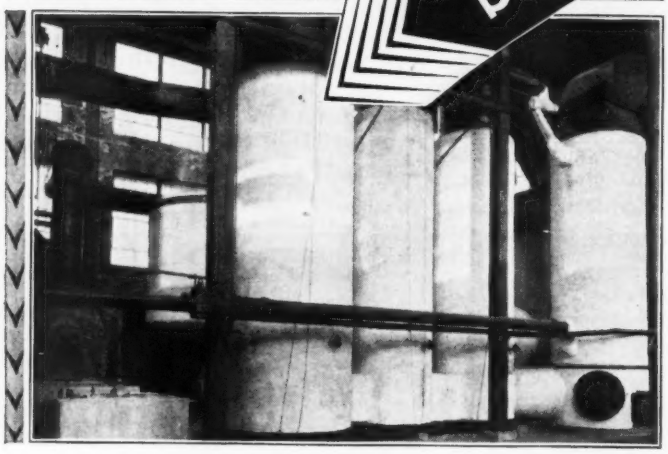

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units and maintain that same established relationship automatically for all load demands. At the same time the operator has the option of manually changing the relationship on any unit either by means of individual automatic control or by individual push button control and he may operate this unit at constant or variable loads independent of other units for any desired period of time.

The result is a marked gain in overall steam generator efficiency, operating flexibility, and a minimum in operating labor requirements, all of which affords better combustion conditions than can be obtained in manual control.

Smokeless combustion is continuously maintained through the proper fuel air ratio for all ratings by automatically holding to a constant excess air for all fuel burning rates. An increase in air supply precedes an increase in fuel supply and as the fuel feed is decreased the air supply is proportionally decreased but still held in excess to compensate for the lag between the fuel feed reduction and the fuel delivered to the furnace.

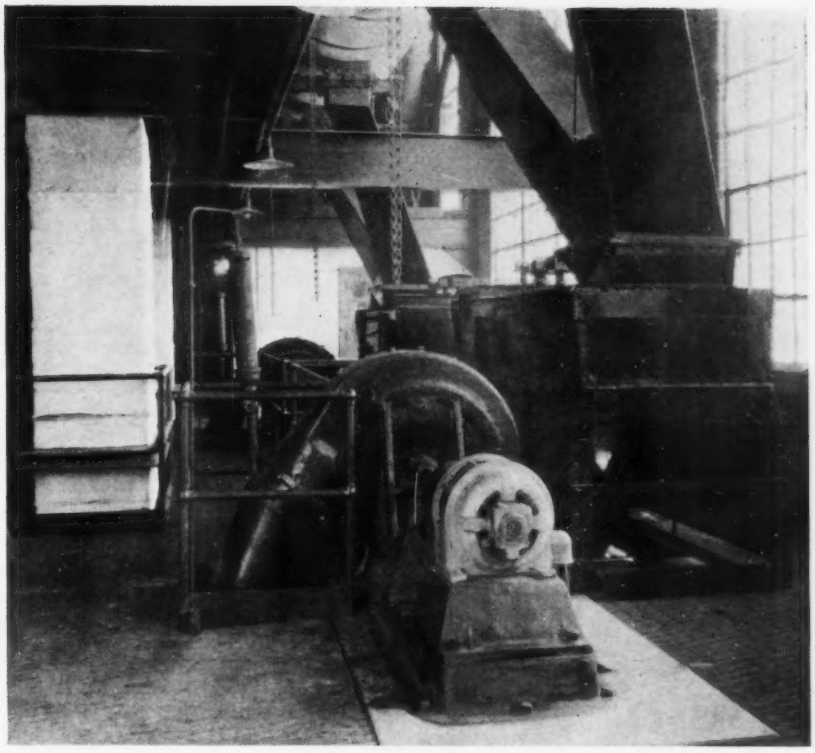

Fig. 6—Floor elevation above firing aisle in front of high pressure boilers shows bottom of bunker, downspouts, automatic weighing scales, mill exhausters and forced draft air ducts. Automatic scale to right of exhausters

Fuel System

The high pressure boiler plant is designed to permit the firing of fuel oil, refinery gas, coal or petroleum coke. Tri-fuel, turbulent, short flame burners of Bailey-Tenney design make possible the firing of any single fuel, or the combination of all three fuels at one time, if desired. Steam atomization is used in connection with fuel oil firing.

Coal handling equipment consists of a Pennsylvania crusher, Jeffrey Manufacturing Co. elevator and belt conveyor with automatic reversible tripper which discharges coal into the stoker hoppers through renewable wood lined rectangular ducts as shown in Fig. 2. The high pressure boilers are each equipped with a Richardson automatic scale placed between the bunker and the pulverizer feeder as shown in Fig. 6.

Constant speed air-swept ball type mills, of Fuller-Bonnot make, as shown in Fig. 7 constitute the pulverizer equipment with the high pressure units.

Three high pressure boiler furnaces of Fuller Lehigh make are designed with side and rear walls water cooled and with air cooled front walls above the burners as shown respectively in Fig. 8 and Fig. 9. This arrangement of walls was selected as best suited for all purposes in view of the inherently high fusion point of ash in coal available in this district, the possibility of more efficiently

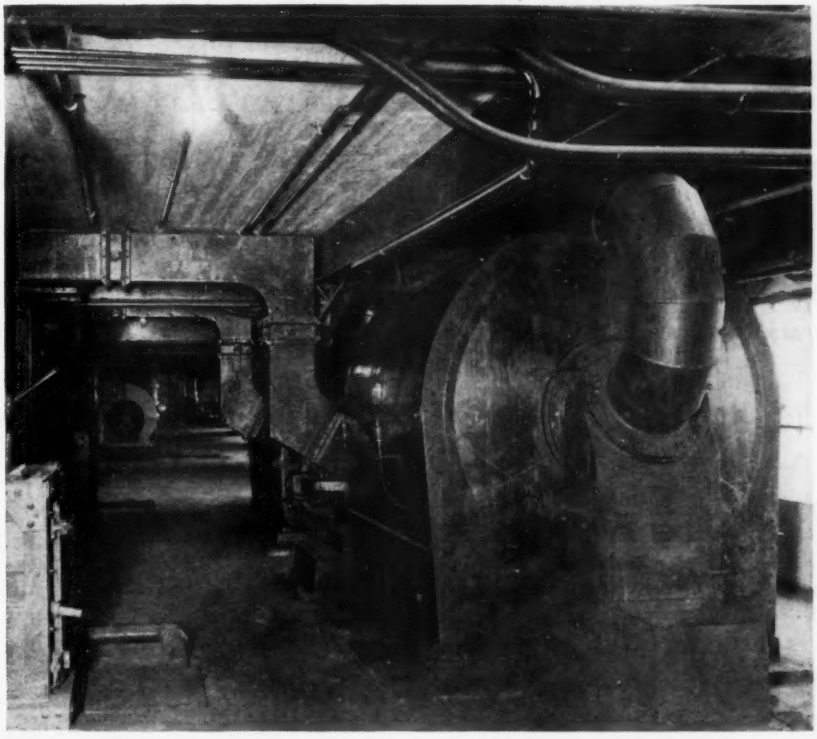

Fig. 7—View of basement beneath firing aisle shows pulverizing mills, primary air ducts and ash gates under high pressure boilers

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Sectional view, showing Jenkins solid wedge closing mechanism.

Sectional view, showing Jenkins Double Disc Parallel Seat closing mechanism.

Fig. 325, Jenkins Standard Iron Body Gate Valve, Screwed, with Solid Wedge, Inside Screw, Stationary Spindle.

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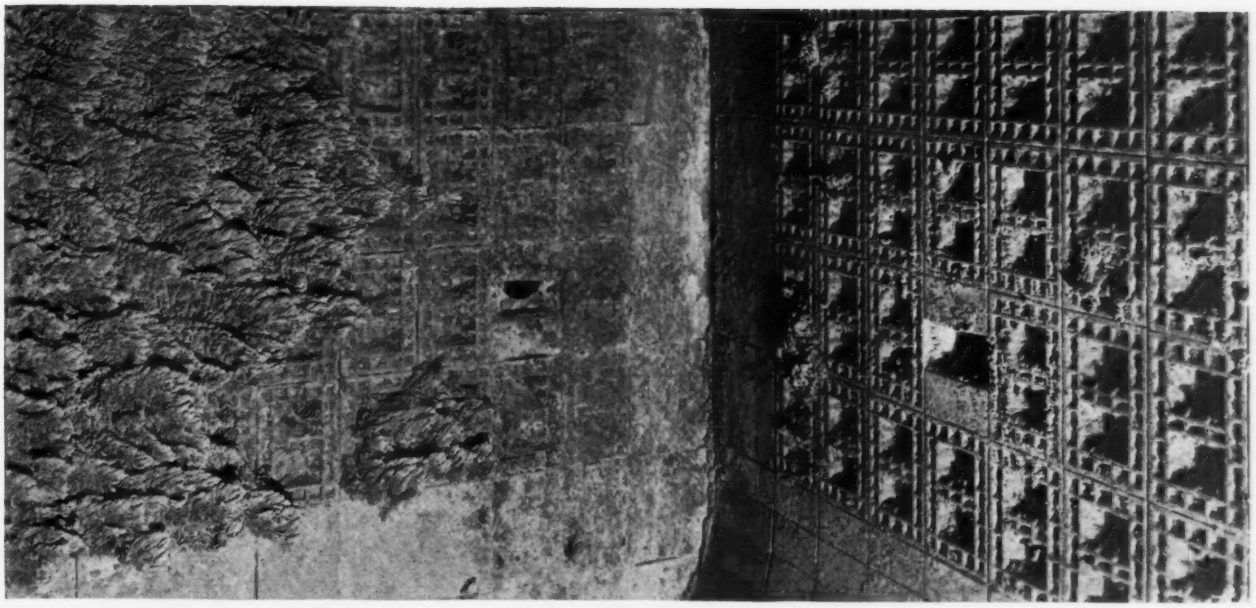

Fig. 8—Corner in rear of high pressure boiler furnace shows bare blocks at furnace bottom which rapidly transfers heat to water tubes behind blocks, producing a cool bottom zone which solidifies molten slag accumulating on and flowing down furnace walls

burning petroleum coke as well as the low gravity fuel oil available. It is believed that this type of furnace will produce the high furnace temperatures required with a minimum of maintenance.

Air circulation in the front walls is obtained by chimney action. Front walls are designed, however, for duct connections to forced draft fans if, from the maintenance standpoint, more cooling air should be found necessary. The furnace hopper bottoms running down at an angle of 45 degrees from the two side walls consist of tubes covered with bare iron blocks, allowing rapid transfer of heat and thereby solidifying the ash preparatory to removal by gravity into a sluiceway beneath each unit. (Note sloped bottom, lower corner of Fig. 9). Above the furnace bottom for a distance of approximately two-thirds of the furnace height, the water walls are covered with "waffle" blocks which retain a portion of the molten slag forming their own refractory surface.

The remainder of the furnace height consists again of bare blocks which form a cool zone through which the furnace gases pass just prior to their entry into the tubes of the boiler first passes eliminating thereby slag formation on the lower rows of boiler tubes.

The thickness of ash on the "waffle" blocks is entirely a function of the boiler rating. If the boiler rating is low, the ash accumulates in the "waffle" block recesses and builds out into the furnace to a thickness controlled by the rate of heat transfer between the furnace temperature and the temperature of the water tubes. The water walls are thus prevented from absorbing as much heat as they would at higher ratings.

As the water walls absorb less heat the furnace temperatures increase, until the melting point of the accumulated ash is reached, when a balance is established. Conversely, if the boiler rating is high, the furnace temperature increases and melts the accumulated ash on the water walls, thereby reducing this refractory thickness.

As the ash accumulation on the blocks is decreased, by reason of higher furnace temperatures, the water walls absorb more heat with a resulting reduction in the furnace tempera-

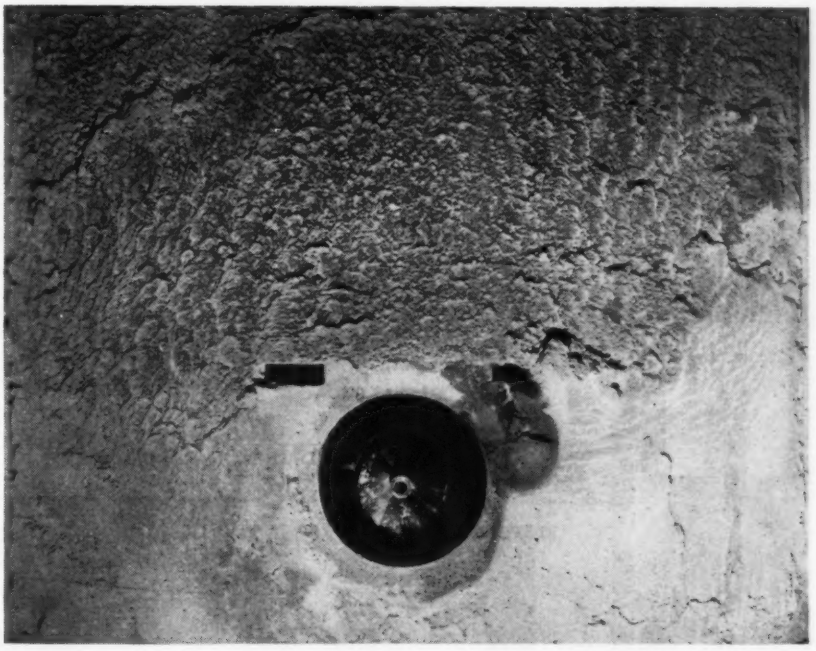

Fig. 9—Furnace front wall shows burner and inspection holes. Plain bare blocks below burner show no slag accumulation by reason of rapid heat transfer. Slag solidifies as it flows down walls and enters cool bottom zone

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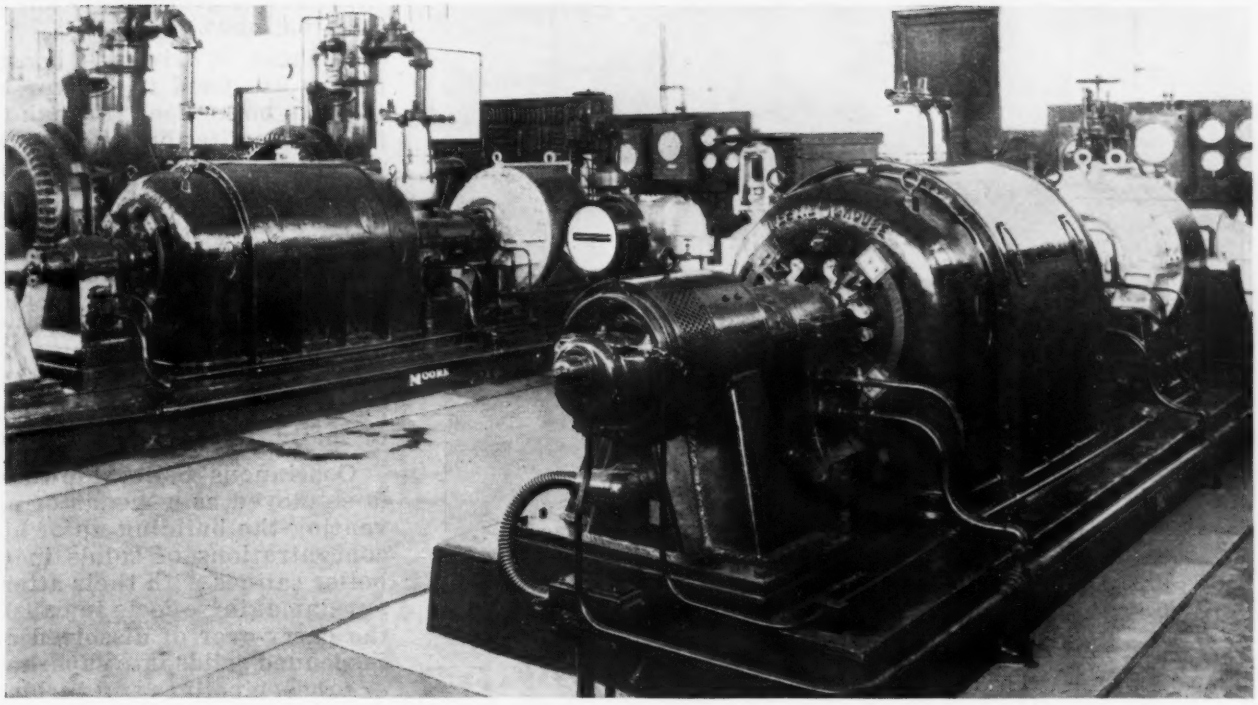

Fig. 11—Back pressure turbo-generators furnish by-product power to process. Synchronous motor driven air compressors (left background) bring power factor practically to unity

ture. In other words, the thickness of ash on the water walls is a function of boiler rating and the furnace automatically adjusts itself to proper temperatures for best combustion conditions.

High furnace temperatures are best suitable for completely burning the fuel and for minimizing smoke conditions, especially when burning pulverized coal and more especially when burning petroleum coke. Heavy fuel oil from zero to five degrees Baume' also burns much more readily in high temperature furnaces. Due to the location of the refinery within the city limits, every recourse was adopted to eliminate smoke.

An illustration of automatically maintained refractory wall is shown in Fig. 8. This shows a side wall made up of "waffle" blocks which have been cleaned of accumulated ash. The rear wall in this picture, which is of the same construction as side walls, clearly shows the "mossy" ash accumulation which has not been disturbed. It shows the freedom from ash accumulation which results with the bare iron block construction, shown in the lower section of the furnace on vertical rear wall and sloping bottom side wall.

Low furnace wall maintenance was the guiding factor in the selection of this equipment. The low pressure boiler furnaces are equipped with plain tube rear water walls with solid refractory side walls.

Furnace gases pass from the high pressure boilers upward through the tubes of vertical air preheaters and are removed by combustion controlled turbine driven induced draft fans.

Diamond Power Specialty Co. telescopic soot blowers are arranged to travel laterally across the top tube openings of the air preheaters and to discharge steam vertically downward through the tubes. Fly ash is collected at the bottom of the preheaters by Allen-Sherman-Hoff soot valves which conduct the ash to the sluice trenches by

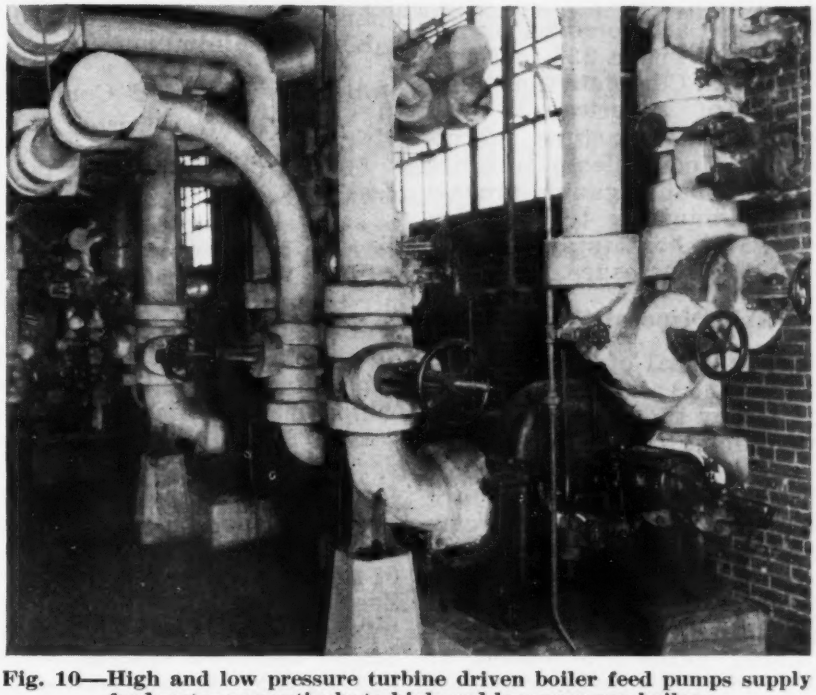

Fig. 10—High and low pressure turbine driven boiler feed pumps supply feed water respectively to high and low pressure boilers

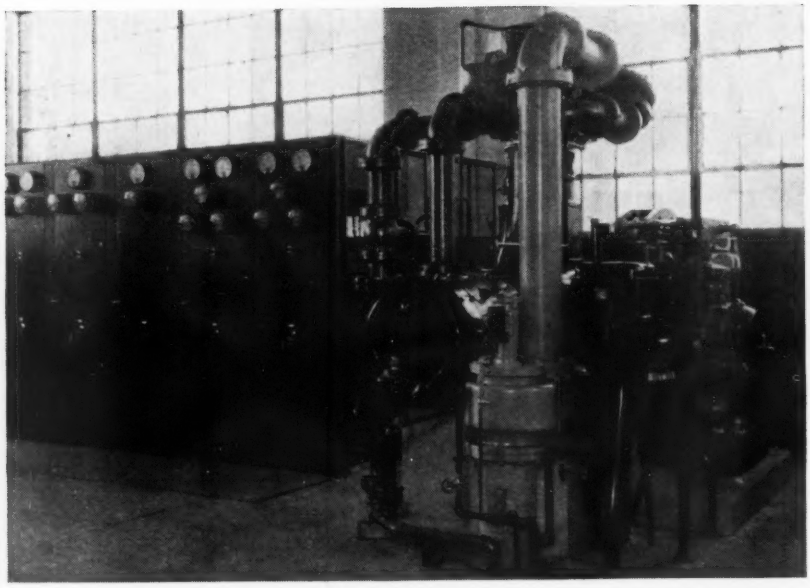

Fig. 12—Cubical type switchboard affords easy access to meters from both front and rear by means of swing door construction

means of water jets. This provides a very effective and clean method of soot removal.

Preheated air for combustion is supplied by turbine driven forced draft fans the speeds of which are governed by push button or automatic combustion control and which fans direct the air around the tubes of the preheaters where it absorbs the major portion of the heat from the boiler exit gases before passing into the burners and pulverizing mills.

The low pressure boiler units are operated with forced draft supplied by combustion controlled turbine driven fans. Furnace gases are removed by natural draft with a 225-foot concrete stack. Complete fan equipment is of American Blower Company manufacture operated with Moore steam turbines on 125 pound gauge process steam exhausting to the open feed water heaters at 5 pound gauge back pressure.

Ash Disposal System

The disposal of ash from all boilers and air preheaters is handled by the Allen-Sherman-Hoff sluicing system. The larger lumps of ash from the low pressure boiler furnaces are broken through grids and carried along by water jets placed at intervals down the sluiceway. When ash is removed from the high pressure units, counterbalanced gates are opened at each end of the furnace bottom and oscillating nozzles play jets of water up into the bed of accumulated ash under-cutting the mass which gravitates into the sluiceway through the grids. The whole is washed into a sump pit beneath an outside pump house.

Vertical ash pumps elevate the ash and water to a track pit where removal is made by grab bucket. The sluicing water which is pumped out with the ash is screened and gravitates back to the pump pit where it again serves as dilution water. Ash from both high and low pressure boilers is handled on the day shift only, thereby reducing ash handling labor to a minimum.

Boiler Feed Water Conditioning and Operation

Boiler feed water is taken from the Genessee river which is subject to rapid changes due to high and low water periods. At times of high water, the supply is very turbid, requiring filtration. Whether high or low water exists, this river supply contains an amount of hardness which makes treatment necessary. The selection of a proper water treatment was therefore governed by both conditions. Proper boiler operating conditions demand a feed water of the lowest possible hardness. Zeolite softening equipment was selected, preceded by an ample filtration system, which has proved entirely adequate without any preliminary chemical treatment.

Turbine driven booster pumps are used to deliver the makeup boiler feed through the filters, zeolite beds, heat exchangers, and into the feed water heaters. Boiler feed pumps, shown in Fig. 10 take suction from the open heaters and supply feed water to the boiler through Copes regulators of the constant differential pressure type. The boiler feed pumps are selectively turbine and motor driven for purposes of maintaining a heat balance.

Continuous boiler blowdown is employed as a means of preventing the building up of high concentrations of solids in the boiler salines with their attendant damaging effects in causing the carry-over of dissolved and suspended solids into superheater tubes, pipelines and turbines. The percentage of blowdown is determined by daily tests for boiler concentration and is held to a predetermined amount.

This quantity is calibrated by means of individual boiler float control boxes. The blowdown which runs as high as ten per cent of the boiler feed, carries away with it an appreciable amount of heat in boiler water. This heat is practically all recovered by use of heat exchangers in which the sensible heat in the blowdown water is transferred back to the makeup water entering the feed water heaters.

Generating Equipment

The electric load of 2250 kilowatts is divided into three units for the purpose of maintaining the greatest flexibility from an operating standpoint. The generating equipment consists of one General Electric 1500-kilowatt turbo-generator set and two 750-kilowatt Westinghouse generators which are driven by Moore turbines and which are shown in Fig. 11. One 750 kilowatt generator is a standby.

The throttle valves of each turbine are equipped with emergency trips, solenoid operated, by two remote control switches. These switches, located at two turbine room exits, together with main steam header valves designed for motor operation, constitute the emergency safety

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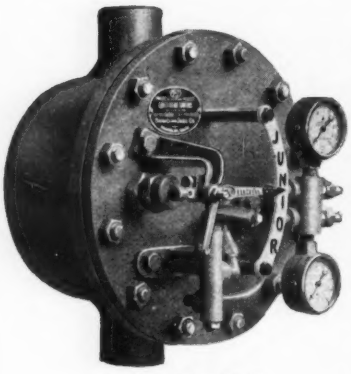

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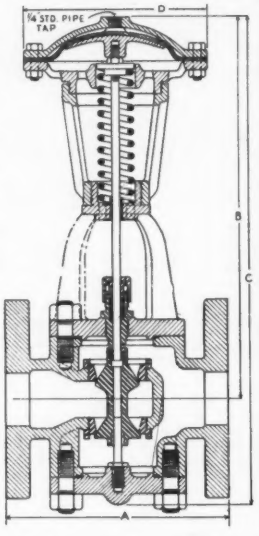

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The entire switchboard equipment, shown in Fig. 12, is of Westinghouse manufacture. The switchboard itself is of the cubical type which allows ready access at both the front and rear of each individual panel. Each panel front is hinged and swings out into the turbine room, making it possible to calibrate and repair all meters without dismantling.

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Each boiler unit is supplied with instruments to indicate and record all principal operations. Bailey boiler meters indicate, record, and integrate boiler steam and air flows; record individual boiler superheated steam temperatures; and record collective feed water pressures and temperatures. Bailey turbine room meters record steam temperatures and pressures into and out of prime mover turbines and steam flows through the turbines.

Builders Iron Foundry Co., Venturi meters indicate, record and integrate boiler feed water quantities. Bailey multi-pointer indicating gauges show forced draft pressure at air preheater inlets and outlets, furnace drafts, boiler outlets drafts, induced draft fan suction pressures, and mill exhauster suction pressures. Each boiler is equipped with a Leeds & Northrup potentiometer pyrometer of the multipoint recording type, which accurately records average flue gas and air temperatures entering and leaving the air preheater by means of the distribution of a number of temperature detectors across each duct.

Construction and Design

The Sinclair Refining Co., maintains its own engineering organization for the complete design and construction of its various units, both in the power and in the refinery fields. In addition to the Wellsville plant, there are two more by-product power projects under way, which, completed, will total three by-product power generating stations for three of its largest refineries.

New Patents

Prepared by R. E. Burnham, patent and trade-mark attorney, 1343 H Street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

April 21, 1931

REFINING

Process for treating and rectifying vapors—Paul J. Carlisle, Niagara Falls, N. Y., assignor to Roessler & Hasslacher Chemical Co., New York, N. Y. No. 1,801,412.

Process and apparatus for continuous treatment of hydrocarbon oil with a metallic. halide—Richard W. Hanna, Piedmont, Calif., assignor to Standard Oil Co. of California. No. 1,801,627.

Process for breaking petroleum emulsions—Claudius H. M. Roberts, El Dorado, Ark., assignor to Tretolite Co., Webster Groves, Mo. No. 1,801,090.

Distillation apparatus—Frederick G. Ring, New York, N. Y., assignor to Petroleum Derivatives Inc., No. 1,802,-274.

PRODUCTION

Sucker-rod guide—Frank W. Sutton, Okmulgee, Okla. No. 1,801,294.

Well-pump lubricator—Andrew C. Carson, Shreveport, La. No. 1,801,304.

Tailpiece for well-tools—Lloyd Dalldorf, Southgate, and Millard S. Black, Huntington Park, Calif. No. 1,801,334.

Well-packer—Charles H. Lane and Charles H. Reynolds, Houston, Tex. No. 1,801,353.

Valve—Irwin B. Winsor, Tulsa, Okla. No. 1,801,383.

Well-drilling apparatus — Waldo Sheldon, South Norwalk, Conn., assignor to Sheldon Machinery Corporation, New York, N. Y. No. 1,801,391.

Inside casing-cutter—Ellsworth Gray, Houston, Tex., assignor to Gray Tool Co., same place. No. 1,801,424.

Well-casing lifter—Ira W. Neeley, Memphis, Tenn. No. 1,801,448.

Fishing-tool—Elmer E. Pryor, Fullerton, Calif. No. 1,801,456.

Milling tool — Alexander Boynton, San Antonio, Tex. No. 1,801,482.

Oil-well pump—William F. McMahon, Riverside, Calif. No. 1,801,520.

Locking underreamer—John Grant, Los Angeles, Calif. No. 1,801,552.

Rotary drilling-jar — Granville S. Knox, Los Angeles, Calif. No. 1,801,673.

Core-drill head assembly—Chester Oliver, Ventura, Calif. No. 1,801,789.

Transmission for earth-boring machines—William P. Jaspert, Swissvale, Pa., assignor to Westinghouse Electric & Mfg. Co. No. 1,801,865.

Drill-stem guide—Gustavus A. Montgomery, Dallas, Tex. No. 1,801,968.

Sucker-rod elevator—Harold K. Penny, Dallas, Tex. No. 1,801,976.

Method and apparatus for sealing well-casings—John F. Saye, Bell, Calif. No. 1,801,983.

Fishing-tool—Herbert E. Schfer, Seminole, Okla. No. 1,801,984.

Apparatus for making and breaking joints—James B. Kinser, Tulsa, Okla. No. 1,802,210.

MISCELLANEOUS

Production of hydrocarbons—Rudolf Wietzel, Ludwigshafen-on-the-Rhine, and Kurt Fischer, Leuna, Germany, assignors to Standard-I. G. Co., Linden, N. J. No. 1,801,382.

Liquid storage tank—John H. Wiggins, Bartlesville, Okla. No. 1,801,580.

Liquid-sealed closure for gauge-holes—John H. Wiggins and Carroll A. Turner, Tulsa, Okla.; said Turner assignor to said Wiggins. No. 1,801,581.

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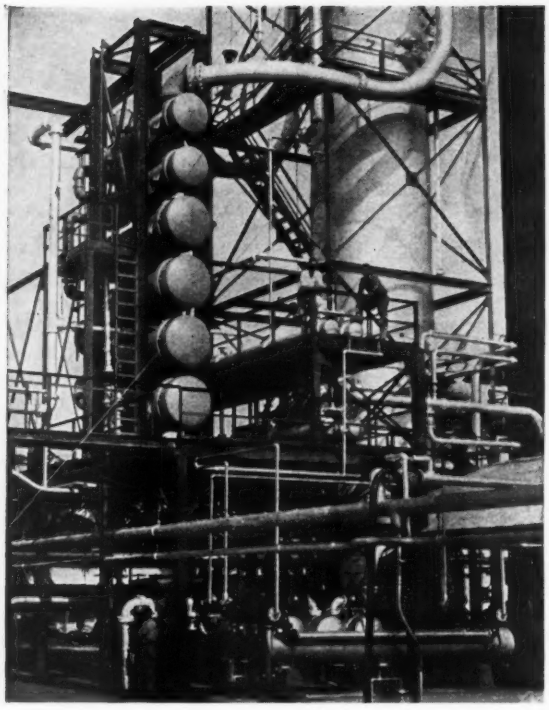

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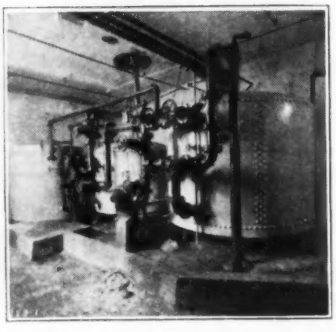

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Fig. 13—Residue left after a cathode vacuum distillation of a ceresine of 74° C. m. p.

Fig. 14—Paraffin of 37° C. m. p. from Grozny paraffin base crude oil

Fig. 15—Paraffin of 47° C. m. p. from Grozny paraffin base crude oil

Properties and Structures of Paraffin Waxes and Ceresines

By Dr. A. N. Sachanen, Miss L. G. Zherdeva and A. N. Vasilyev*

Part 4

THE crystalline structure of paraffin changes depending on the admixtures. When adding oil to paraffin the strips become of a larger size under these crystallization conditions, while the general character of the structure remains substantially unchanged.

An admixture of ceresines exercises quite a different influence. To investigate this influence ceresine of 84.8°C. melting point was added to paraffin of 44.5°C. melting point. The structure of paraffin was noticeably changed upon addition of 1 per cent of ceresine. However, the paraffin strips still remained and are seen plainly (see Fig. 18). The strips are poorly developed when 5 per cent ceresine are added (see Fig. 19). Here, a change to structures shown in Fig. 20 and 21 for 10 per cent and 20 per cent of ceresine admixture can be seen. These mixtures give a crystalline structure which is characterized by the absence of long strips. The crystals are composed of long flat needles which are slightly interconnected. Such mixtures do not sweat. The phenomenon of sweating disappears on the addition of 2 per cent ceresines, i. e. at a stage when the visual and microscopical change of crystalline structure is no longer clearly expressed.

Thus the crystalline structure of paraffins is given mainly by the amount of ceresines admixed. Pure paraffins give a strip-like structure, this structure is not changed to any appreciable extent by an admixture of oils or tars, while these admixtures influence only the size of crystals. However, ceresines exercise a very decided influence on the crystalline structure of paraffins changing simultaneously their fundamental properties to the same extent and the ability of retaining oils, filtration, sweating, etc.

It should be noted that the cause of a different crystalline structure of paraffins is explained by other authors in a different way. J. A. Carpenter[13] is proving the existence of two allotropic modifications of paraffin crystals with a transition point which is about 10-15° below the melting point. The first modification is characterized by plate shaped the second by needle like structure. The existence of two paraffin modifications can hardly be considered proved. As cited further, by the above American investigators both structures can be obtained at the same temperature.

Rhodes, Mason and Sutton[14] say that paraffin needles are of a secondary origin and are formed by the twisting of plates. They are of the opinion that two types of crystals should be looked upon as two crystalline modifications of a single solid phase.

Padgett, Hefley and Henriksen[15] are of the opinion that various kinds of paraffin exist and that the structural varieties are due to the above fact and to the influence of oils and asphaltic materials.

Buchler and Graves[16] accept the theory that the crystalline

*Translated from the Russian by A. A. Bochtlingk.

[13]Jour. Inst. Pet. Tech.: *12*, 288(1926); C. A.: *20*, 3802(1926).

[14]Ind. Eng. Chem.: *19*, 935(1927); C. A.: *21*, 3125(1927).

[15]Ind. Eng. Chem.: *18*, 832(1926); C. A.: *20*, 3075(1926).

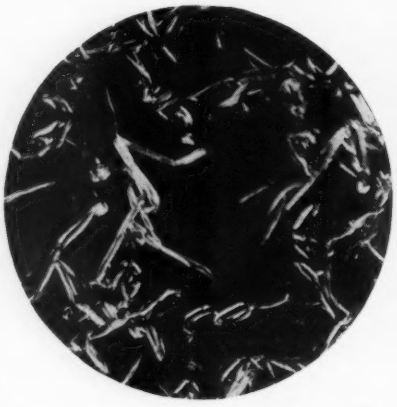

Fig. 16—Paraffin of 57° C. m.p. from Grozny paraffin base crude oil

Fig. 17—Paraffin of 60°C. m.p. frome Surakhanui crude oil

Fig. 18—Paraffin of 44.5° C. m.p. to which 1% of ceresine had been added

structure of paraffins depends on the admixture of some soft wax which is not further investigated. Pure paraffins form plate shaped crystals. A certain amount of soft wax is required to form needles, while an excess of it leads to the formation of an amorphous or microcrystalline structure.

Jones and Blachly[17] are in favor of the above theory. The distinction between amorphous and crystalline paraffin is due to the surface tension which in its turn depends on the admixture of some active ingredients (impurities).

Our conclusions are in agreement with those of Jones and Blachly with the exception that we consider the substances causing the change in the basic crystalline structure of paraffins to be the ceresines which may be present in varying proportions together with paraffins in crude oils and which are separated from paraffins by means of distillation and fractionation.

[17]Ind. Eng. Chem.: *21*, 318(1929); C. A.: *23*, 2560(1929).

General Conclusions

Ceresines as well as paraffins form a series of hydrocarbons of the paraffin series. Ceresines, contrary to paraffins, form stable mixtures with oils. The latter can not be separated from ceresines either by filter-pressing or by sweating.

Ceresines can be distilled without decomposition if the temperature is lowered accordingly. They distill with a partial decomposition at more elevated temperatures and are consequently converted in part to paraffins. Crude oils contain paraffins as well as ceresines. These paraffins are obtained in distillates mostly from paraffins already contained in the crude oil and only part of them are obtained from the decomposition of ceresines.

Surakhanui crude oils contain a considerable amount of ceresines, the separation of which made it possible to investigate their properties. At identical melting points ceresines are distinguished from paraffins by a higher molecular weight, higher specific gravity, higher viscosity, higher boiling points and higher nitrobenzene points.

The high boiling point of ceresines permits their separation from paraffins, the latter being easily distilled off together with the distillates, while the ceresine is concentrated in the residue of an extensive distillation. From the chemical point of view ceresines differ from paraffins by their behavior with fuming sulfuric acid, which reacts energetically with the ceresines. Typical ceresines were also sep-

Fig.19—Paraffin of 44.5°C. m.p. to which 5% of ceresine had been added

Fig. 20—Paraffin of 44.5° C. m.p. to which 10% of ceresine had been added

Fig. 21—Paraffin of 44.5° C. m.p. to which 20% of ceresine had been added

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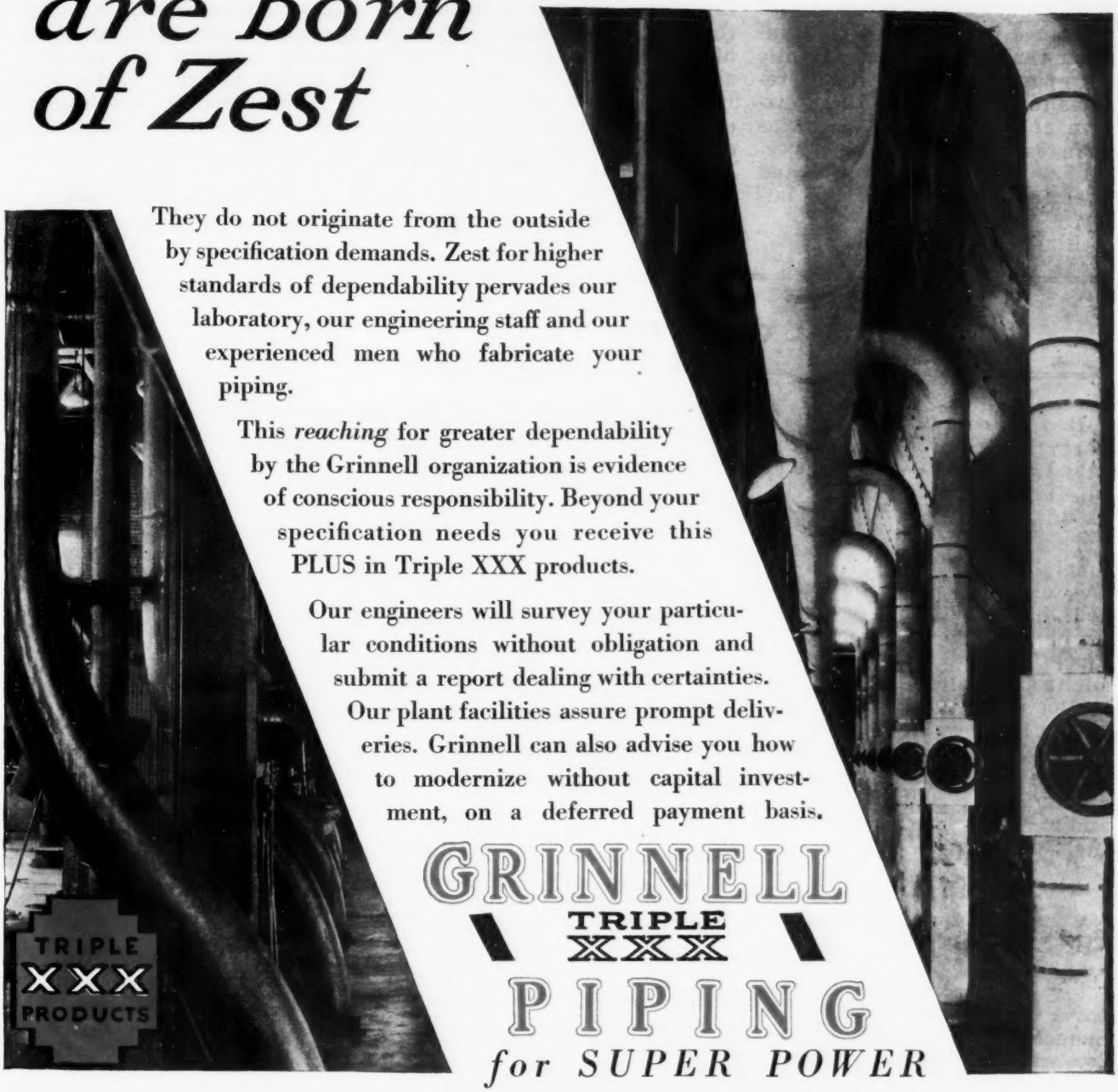

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arated from Grozny paraffin base crude oil.

It is possible that ceresines belong to the isomethane hydrocarbon series. However, this is not proved.

The crystalline structure of ceresines is distinctly different from that of paraffins. While pure paraffins form strips, ceresines form needles. An admixture of ceresines to paraffins changes the crystalline structure as well as the filtration and sweating properties of the latter.

Ceresine if present even in small amounts produces a non-crystallizable (or poorly crystallizable) slack wax, which does not sweat (or which sweats very poorly). A careful rectification therefore is required to remove the ceresines because of their high boiling point. Consequently a mild cracking during distillation is of advantage when ceresines are present, because ceresines which have a high boiling point and high molecular weight are then partly decomposed.

New Equipment

B. F. Sturtevant Co., Hyde Park, Boston, Mass., has published a colorful, well-illustrated, 46-page catalog No. 377 on its unit ventilators.

The ventilator is designed to supply fresh outdoor air, filtered and tempered, into rooms of offices, public buildings or any enclosed places. It is unnecessary, the company points out, to admit all outdoor air to a room in the winter. For this purpose it has developed its partial recirculating type unit ventilator, which makes it possible to admit 50 per cent out-door air and to recirculate 50 per cent of the indoor air.

* * *

Spence Engineering Co., Inc., 110 E. 42nd St., New York City, manufacturer of pressure regulators, has placed under one cover various bulletins on Spence regulators. Formulae for various fluids, a flow capacity chart and a chart indicating the maximum capacity of these regulators are included in the bulletins.

They tell of the all-around adaptability, accurate regulation, operation, low maintenance costs and advantages of the outside pilot and dead-end shut-off of regular and high pressure regulators, and describe and illustrate advantageous points of its pressure relief valves and solenoid controlled regulators. A section is devoted to temperature regulators, pressure control and retaining valves, pressure retaining valves equipped with high pressure electrical cutout, automatic expansion valves, self-cleaning strainers and solenoid operated valves.

* * *

Alco Products, Inc., 220 E. 42nd St., New York, division of the American Locomotive Co., recently opened branch offices in the Esperson Bldg., Houston, and in the Philtower Bldg., Tulsa. R. H. Brinton is in charge at Houston and T. B. Leech at Tulsa, both of whom are sales engineers for oil refinery and heat exchange equipment.

Recently the company appointed John H. Smith as chief engineer, under whose patents condensers have been designed and built in many large power stations in the country. He has had 16 years of experience in the engineering and sale of steam condensers.

The company recently delivered six of the eight tunnel shields to be used for boring the city-owned subway tubes under the East River between Manhattan and Brooklyn, N. Y. Boring began the week of March 9.

* * *

The Foxboro Co., Foxboro, Mass., manufacturer of instruments for controlling, recording and indicating temperature, flow, humidity and pressure, has published a handbook of steam flow measurement, compiled by L. K. Spink, manager of the company's flow meter department.

Steam flow has been explained in two general classifications, one of which covers those applications in which pressure and temperature are almost constant, and the other in which pressure varies widely and accuracy requirements are strict. These discussions include a formula for computing steam flow.

The handbook also describes flow meter installations, flow nozzles and pitot tubes and integrating meters, which are automatic totaling devices that register the total number of pounds, kilograms or boiler horsepower of steam flowing during operation time.

Advantages of the sharp-edge orifice are ease of reproduction, convenience in installing, removing, replacing, ease of cleaning, and flexibility. Principal advantages of the flow nozzle is that its efficiency is so much higher than that of the sharp-edge orifice that a great deal higher rate of flow may be handled with the same d/D ratio and the same differential.

A section in the book includes tables showing how to make hourly chart computations for steam-flow measurement in refineries. It also indicates how to calculate steam flow by the period method, the observation method and the square foot planimeter method.

* * *

C. J. Tagliabue Mfg. Co., Brooklyn, N. Y., opened on May 1 a branch sales office at 2832 E. Grand Blvd., Detroit, Mich. H. W. Kerr, widely experienced in temperature problems, is in charge of this office.

Stock of all Tag indicating, recording and controlling instruments will be carried.

* * *

The Foxboro Co., Foxboro, Mass., has published bulletin No. 148-2 on its dial type thermometers for temperature measurement between minus 30° to plus 1200°F. The 32-page booklet describes each type of indicating thermometer and contains data on dials, ranges, bulbs, tubing, gaugeboards and other details.

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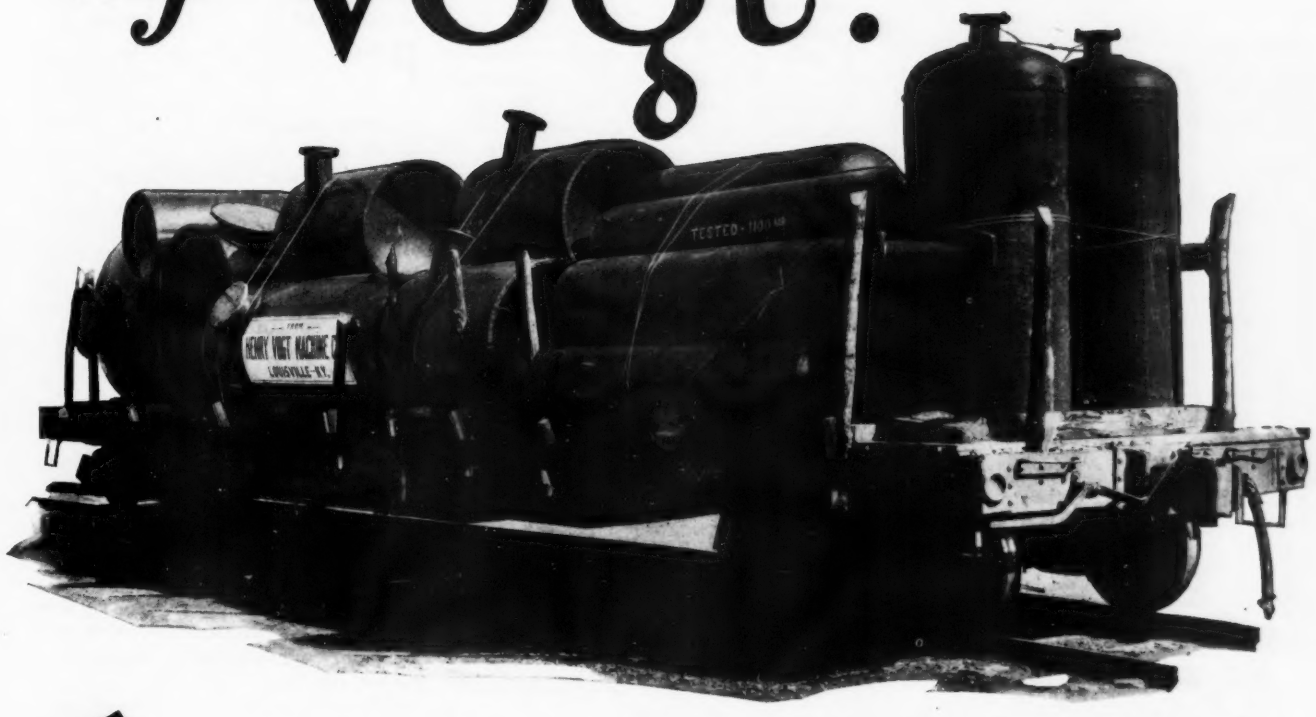

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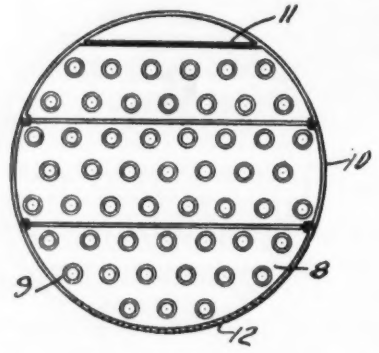
New Refining Patents

Bubble Tower. U. S. P. 1 796 135, March 10, 1931, application filed March 17, 1928; Clive M. Alexander.

THIS invention provides a novel sectional bubble tray, rugged but inexpensive, and so constructed that various sizes of bubble trays may be made up from sections which will pass readily through the ordinary manhole. This permits a considerable range of bubble tray area in constructing a tower, allowing practically all parts to be active, while maintaining a constant relation of down-flowing liquid to up-flowing gas or vapor in the tower.

The sectional tray arrangement is such that liquid enters each compartment at about the same point in a vertical line, and must completely traverse the tray in a uniformly distributed stream and then return to its entrance point for delivery to the next lower tray. Thus every part of each tray is effective in promoting contact.

A sectional tray is shown in the drawing, in which 11 is a partition, made slightly lower than the baffle ring 10 so as to permit overflow from the receiving reservoir.



The portion of baffle ring 10 shown at 12 is cut somewhat lower than the rest, and may also be serrated, to permit discharge of the liquid on the upper surface of the tray. Thus liquid depth may be controlled by choosing the depth to which the portion at 12 is cut and serrated. The upwardly extending nipples 9 are adapted to be fitted with bubble caps.

What Is Claimed

In an improved bubble tower, a vertical container having spaced trays, sealed by the container walls to form compartments, liquid receiving means at corresponding points in a vertical line on each tray, baffles arranged to flow liquid through the central portion of each tray in one direction and in annular paths along the outer portion in the return direction, means for contacting liquid with rising gas or vapor in the liquid paths, and discharge means to convey liquid to the next lower tray.

* * *

Catalytic Vapor Phase Refining. U. S. P. 1 797 255, March 24, 1931, F. A. Apgar and 1 797 262, March 24, 1931, Eugene C. Herthel; applications filed Sept. 14, 1928; assignors to Sinclair Refining Co.

TWO improved procedures are provided in these inventions for refining hydrocarbon vapors by passage over fullers earth or a like adsorptive catalyst. Both are directed mainly toward prolonging the effective life of the catalyst.

In 1 797 255 (Apgar), the vapors are passed successively through two separate charges of the adsorbent; and the sequence in which the two charges are used is periodically reversed. This means that, following each reversal, the initial contact of vapor with solid is made with a catalyst of reduced activity, so that over-polymerization of the unsaturated components is avoided.

In the second charge, where the polymerization is completed to the desired extent, it has been found that the vapor assists in removal of condensed polymers, thus providing a reactivating effect with respect to the adsorbent. When this reactivation has proceeded far enough, the sequence is again reversed. By this means the effective life of the adsorbent is multiplied at least twice, and in some cases as much as ten or more times.

In 1 797 262 (Herthel), reactivation is provided by cyclic use of a washing agent comprising the liquid condensate from higher-boiling vapors, initially mixed with the vapors to be refined. These higher-boiling vapors condense on the adsorbent, along with the polymerized impurities which are to be removed; and the condensed impurities are thus washed from the adsorbent.

The washing agent is recovered for re-use, by distilling it from the condensed polymers and residual tar. The operation is preferably conducted in such a way that the total vapor mixture from the vapor-catalyst contact, including the polymers formed and the oil washing agent, is separated by fractionation, so as to minimize retention of condensed polymers or liquid washing agent on the catalyst.

What is Claimed

1 797 255: Passing hydrocarbon vapors to be refined successively through two separate bodies of an adsorptive catalyst, and before complete deactivation of the then first body periodically reversing the sequence of vapor passage as the operation continues.

1 797 262: Passing hydrocarbon vapors to be refined through an adsorptive catalyst and thereafter separating from the vapors high-boiling polymers produced by the vapor-catalyst contact and fractionally condensing higher-boiling constituents, vaporizing oil components from the polymers and higher-boiling condensate, condensing these constituents free from polymers and tar, and passing this oil condensate through the adsorptive catalyst as a liquid washing agent with the vapors to be refined.

* * *

Catalytic Cracking. U. S. P. 1 795 761, March 10, 1931, application filed Dec. 1, 1926; John L. Cooley, Assignor to Standard Oil Co. of California.

PRIOR practice in the use of aluminum chloride for cracking heavy oils has now been improved by utilizing the vapor from the heated oil as an auxiliary means of agitation to promote intimate contact of the oil with the reagent. This principle is applied to a continuous process, in which the oil and aluminum chloride are mixed in a flowing stream passing to a reaction chamber, from which the products are continuously withdrawn.

As features of the new process, the spent reagent residue is continuously separated from the mixture undergoing agitation in the reaction chamber; vapors are withdrawn as formed; temperature of the effluent vapor is controlled, with minimum heat loss, by the simple expedient of suitably regulating the feed of fresh oil; most of the heat is supplied to the incoming oil before admixture with the aluminum chloride; and conversion is improved by withdrawing partially converted oil from the reaction chamber, reheating it and circulating it back to the reaction chamber.

Low-boiling components are removed from the incoming oil in a flash chamber, following formation of such volatile components by an initial partial conversion occurring when the aluminum chloride is first added to the stream of preheated oil. The vapor thus withdrawn is passed to a distributor near the bottom of the reaction chamber, and is thus forced to pass up through the reacting system. The agitation thus obtained may be the sole means of agitation, but it is preferable to provide also a mechanical agitator and scraper.

What is Claimed

Mixing oil with aluminum chloride in a flowing stream at a temperature sufficient to cause reaction with formation of low-boiling components, passing the stream to a flash zone, separating the volatile components as vapor, passing the vapor and the oil-reagent mixture in separate streams to a conversion zone in which the vapor stream is contacted while still hot with the oil mixture to provide agitation while maintaining the mixture at a decomposition temperature.

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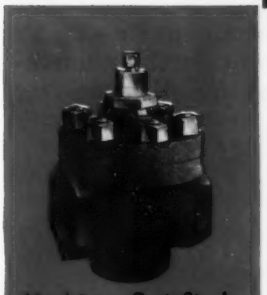
You realize the advantages of the plug type. Now with the application of the "Sealdport" principle, lubricant is uniformly distributed to every part of the plug and contacting surface of the body without creeping into the line. So there is always a film of lubricant, under hydraulic pressure, between plug and body. As long as there is lubrication, friction and abrasion cannot cause destruction. Hence, longer wear, longer life—and vastly cheaper valve cost. So your replacement costs with Nordstroms are but a fraction of what you have been paying in the past.

Many Nordstroms are giving five, ten and more times as much service as unlubricated types. Even double the life makes them the cheapest, in spite of the fact that the initial cost might be a fraction more. Ask for catalog. Also data on "Merco" Pipe Joint Compound.



Nordstrom Cast Steel Valve. No. 2212, Screwed. Sizes ½-inch to 3-inch, inclusive.

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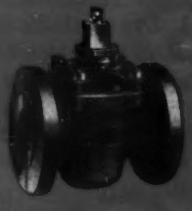

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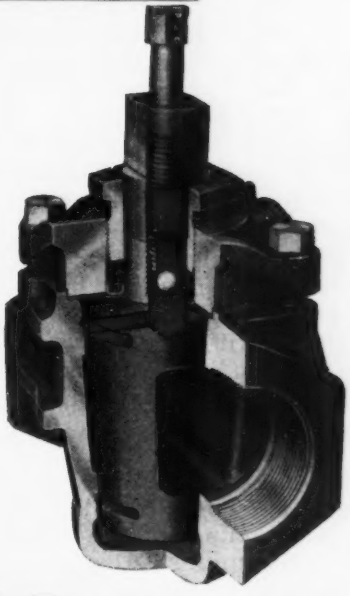

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Buenos Aires, Argentine - General Electric, Soc. Anon., Victoria 618 Esq. Peru.

Examiner Recommends High Oil Rate Level from Kansas City

WASHINGTON, May 4

AFTER years of fighting for detachment from the Mid-Continent freight rate adjustment on their northward bound traffic, Kansas City refiners have won a recommendation to that effect in a proposed report promulgated by the Interstate Commerce Commission. The level of the rates proposed to be made is very high.

Under the plan, devised by Examiner J. J. Williams, their rate from Kansas City (Argentine) to St. Louis would go up from 22 to 27 cents a hundred pounds and their rate to Chicago would ascend from 29 to 32 cents. That Examiner Williams expects no such result is to be inferred from the fact that he said that whether the rates to those two big points of consumption would go up or remain where they are would depend on the determination of the railroads whether they could afford to undertake such increases in the face of such opposition as was shown by the Mid-Continent refiners a few years ago when the railroads thought they would take the full amount of the increases the commission authorized in the rates to St. Louis and Chicago.

The new plan cuts loose from the adjustment made in the big Mid-Continent rate case of 1925 in the making of rates to northern Missouri, Iowa, Wisconsin, Illinois, Nebraska, Minnesota and the Dakotas. The plan on which rates are now made is through differentials under Group 3. The governing differential to much of the territory is 7 cents under Tulsa. It runs as high as 8 cents.

Williams proposes that the rates hereafter be made 25 per cent of the first class rates prescribed in the Western Trunk Line class rate revision on the refined products and 80 per cent of the refined rates on the lower products such as gas and fuel oil.

Formal allegations by the Independent Oil & Gas Co. (now Phillips Petroleum Co.) and the Sinclair Refining Co. in which they asked for an adjustment that would, as they said, give recognition to them as being not a part of the Mid-Continent adjustment, started the fight in which about 20 oil refiners intervened.

In substance the complaint of the Kansas City group was that the rates it paid were too high because the commission, in the Mid-Continent case, had overemphasized the necessity of permitting the Oklahoma refiners to compete with the Kansas City refiners, thereby depriving the latter of the benefit of their geographical proximity to the Western Trunk Line markets.

Sinclair suggested the making of the rates on percentage of the Western Trunk Line first class rates but named percentages ranging from 20 to 22.5 of first class rates, obviously with the thought that there should be no material, if any, increases to important points while there would be reductions to many markets of lesser weight.

Shell Petroleum Corp. said that the percentage system was proper but said that the class rates took into consideration the varying conditions throughout the territory and that only one percentage of first class rates should be used. It won the point.

The proposed adjustment covers so many hundreds of what are treated as important key points that it would take a careful analysis to make a comprehensive estimate as to whether the reductions or the increases were in greater number. On the face of the figures it seems that there would be many increases in the parts of the territory nearest Kansas City and terrific cuts to the more distant points in the Dakotas and Minnesota.

The accompanying table gives present and proposed rates to a few points in the states named. Formerly there were rather large destination groups taking identical rates in these states but with the proposed rates taking a definite percentage of the first class rate there will be many variations from present rates.

Present and Proposed Rates from Kansas City (Group 1) Refineries

(Light oil rates in cents per hundred pounds)

Missouri	Present	Proposed
Jefferson City	19.5	21
St. Joseph	13	13
St. Louis	22	27
Sedalia	16	17
Iowa		
Cedar Rapids	27.5	28
Council Bluffs	24	22
Mason City	31	29
Ottumwa	24	24
Sioux City	28	27
Illinois		
Chicago	29	32
Peoria	28.5	28
Springfield	28.5	27
Wisconsin		
Green Bay	39	40
Milwaukee	32.5	35
Waukesha	32.5	35
South Dakota		
Aberdeen	48	40
Huron	41	37
Madison	41	34
Watertown	43	37
North Dakota		
Bismarck	75	50
Devils Lake	67	52
Fargo	55	45
Minot	74	52
Minnesota		
Albert Lea	35	31
Minneapolis	35	35
Willmar	35	38
Nebraska		
Beatrice	24	24
Crawford	61	45
Lincoln	24	26
Omaha	24	23
Superior	30.5	28

The Cincinnati Advertising Products Co., Cincinnati, O., has sent out an attractive circular advising that it moved May 1 to its new plant at 3266 Beekman St., Station A, Cincinnati. The new plant has more space, is conveniently built, so that all departments are on the ground floor, and has a railroad siding at the door.

New equipment has been installed, including washing, drying and automatic decorating machines, glass-bending oven and decorating lehr and baking-enameling equipment for glass signs and advertising globes.

ON THE LAZY BENCH

Tough Times in Texas

I have been bawled out, balled up, held down, hung up, bulldozed, blackjacked, walked on, cheated, squeezed and mooched; stuck for war tax, excess profits tax, state dog tax and syntax; Liberty Bonds, baby bonds and the bonds of matrimony; Red Cross, green cross and double cross; asked to help the society of John the Baptist, G. A. R., Woman's Relief Corps, Men's Relief, and stomach relief. I have worked like hell and have been worked like hell; lost all I had and now because I won't spend and lend all the little I earn and go beg, borrow or steal, I have been cussed, discussed, boycotted, talked about, lied to and lied about, held up, hung up, robbed and darned near ruined, and the only reason I am sticking around now is to see what's next.

—Pure Oil News
The Pure Oil Co.

* * *

A foot on the brake is worth six in the cemetery.

—The Safe Driver
National Safety Council

* * *

Salesmen are notoriously bad grammarians. They always end a sentence with a proposition.

—Union Oil Bulletin
Union Oil Co. of California

* * *

When the Day Is Done

Little girl (disturbed at her prayers by scratching on the screen door): "Stand by, God, while I let the cat out."

—Pure Oil News
The Pure Oil Co.

* * *

Revealed

"Ah, my dear young lady!" exclaimed the attendant at the awesome entrance of a silken-hung room. "You wish to consult Madame Maharajah, the great mystic of the orient?"

"Yep," replied the caller. "Tell her that her kid sister's here and ma wants she should get a couple pounds of liver-worst on her way home."

—The Gas Line
West Penn Oil Co.

A Chemist Addresses the Ocean

(After Imbibing Three Stiff Drinks)

O Sea! Thou saline and undulant aqueous solution of halides, carbonates, phosphates, sulfates, and other soluble inorganic compounds! What mysterious colloids are dispersed within they slightly alkaline bosom? What silent and unseen reactions vibrate in dynamic equilibrium, constantly destroyed and instantly restored, among thy unnumbered oscillating molecules?

What uncounted myriads of restless ions migrate perpetually throughout thy tentatively estimated volume? What unguessed phenomena of catalysis, metathesis, and osmosis transpire in thy secret fluid profundities under excessively increased pressure?

What cosmic precipitates descend in countless kilograms upon thy argillaceous, gelatinous, siliceous, diatomaceous and totally unillumined bottom? In short, most magnificent reservoir, what is thy flow-chart and complete analysis?

—Norman L. Knight

* * *

Home Theatricals

Mother: "Ellen, why are you shouting in that horrible fashion? Why can't you be quiet like Willie?"

Ellen: "He's got to be quiet the way we're playing. He's papa coming home late and I'm you."

—Pure Oil News
The Pure Oil Co.

* * *

A kind-hearted gentleman saw a little boy trying to reach the doorbell. He rang the bell for him, then said, "What now, my little man?"

"Run like hell," Said the little boy. "That's what I'm going to do."

—The Arknatco
Louisiana Oil Refining Co.
and Arkansas Natural Gas Co.

* * *

That peculiar dress the Hawaiian girls wear is just an old spinach custom.

—Union Oil Bulletin
Union Oil Co. of California

EN-AR-CO
MOTOR OIL
WHITE ROSE
GASOLINE
WHITE ROSE
ETHYL
ROYAL
GASOLINE
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GEAR LUBRICANT

The National Refining Co.
Cleveland, Ohio

Remove old paint this easy, low-cost way

INVESTIGATE the special low-cost methods especially developed for removing paint from all oil equipment.

You can strip paint from barrels, drums, storage tanks, salvage parts, and equipment the Oakite way, at a fraction of the usual cost. No scraping, no hard laborious work is necessary. With Oakite stripping, the old paint is simply soaked loose.

Write us for complete information or ask to have our nearest Service Man call.

Oakite Service Men, cleaning specialists, are located in leading industrial centers of U. S. and Canada.

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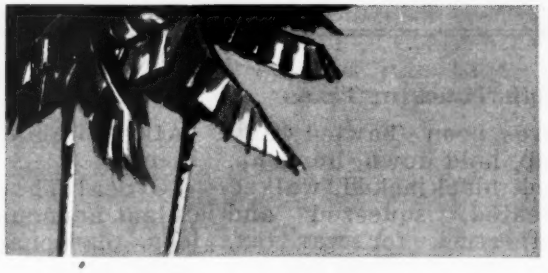
OAKITE
Industrial Cleaning Materials and Methods

THE *New* IMPROVED COL-TEX GASOLINES



BALANCED VOLATILITY— INCREASED POWER AND MILEAGE — THE GREATER VALUE GASOLINES

COL-TEX SPECIAL NEW AND IMPROVED GASOLINE maintains balanced volatility, with an increase in its well known anti-knock value. It is new and improved gasoline. Plan now to hold your trade with it, for it is truly a quality product.

COL-TEX ETHYL GASOLINE — new and improved grade—balanced volatility, powerful—the last word in motor thrills—is a premium gasoline of highest performance value. COL-TEX ETHYL GASOLINE is winning new friends every day. It's a definite business-builder.

COL-TEX BLUE GASOLINE, now available to our contract jobbers in the blue color only, is a good gasoline—well refined and full powered, and is designed for the customer who is willing to sacrifice something for price.

The new and improved COL-TEX products, backed by long years of refining experience, can be depended upon to strengthen our jobbers' position in the present re-adjustment of the oil industry. With COL-TEX products you have a complete family of petroleum products that will meet any and all quality competition.

You are invited to write or wire for full details upon our contract for independent jobbers.

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Sales Manager

COL-TEX REFINING COMPANY
ANDERSON-PRICHARD OIL CORPORATION

PRODUCERS AP REFINERS

OKLAHOMA CITY, OKLA.

Gasoline Taxes Increased 14.5% in 1930 Gallonage Gains Only 4%

By Roger B. Stafford

N. P. N. STAFF WRITER

GASOLINE taxes approached the half billion dollar mark in 1930.

This great sum is revealed in the 1930 gasoline tax compilation just issued by the United States Bureau of Public Roads.

The actual net collection of taxes on motor fuel reached $493,865,117, an increase of $62,553,598 or 14.5 per cent, over 1929 gasoline tax receipts. This was on a total of 14,751,308,978 gallons of taxed gasoline.

Refunds made by states on taxes paid for gasoline to be used for purposes other than as motor fuel in vehicles on the public roads, amounted to $29,106,861, an increase of $8,761,625 over refunds paid in 1929. This was an increase of 43 per cent in refunds.

Refunding grew relatively almost three times as fast as the collections in motor fuel taxes.

The taxed gasoline gallonage in all states and the District of Columbia increased only 4 per cent over 1929. Relative growth in gallonage was less than one third the growth in tax receipts.

The average tax paid in 1930 was 3.35 cents a gallon, the bureau reported. In 1929 the average was 3.22 cents a gallon.

Per car consumption in the United States was virtually at a standstill. The average of 556.3 gallons on the mean number of motor vehicles registered during the year was one tenth gallon less than the average in 1929.

In the states, the story of average consumption of taxed gasoline was different. Variations between the 1930 and 1929 averages were wide in many states, ranging from an increase of 45.1 gallons in the Missouri average down to a decrease of 88.2 gallons in the Pennsylvania average.

If the gallonage figures on taxed gasoline represent the true consumption figures, the theory that gasoline consumption follows the number of automobiles registered is exploded. The gallonage figures, in their increases and decreases by states, show no relation to increases and decreases in automobile registrations, although in the United States as a whole such a relationship exists.

Taxed gallonage of gasoline was less in nine states in 1930 than in 1929. The greatest shrinkage was in Pennsylvania where taxed motor fuel was 119,071,641 gallons less last year than in the year before. This was a decline of 11.4 per cent.

The largest tangible gain was in New Jersey, 48,621,300 gallons. New York shows a gain of 155,000,000 gallons, although part of the demand in that state for 1929 has been estimated because New York did not have a gasoline tax to reveal exact figures all of that year.

Demand in New York in 1930 exceeded 1,400,000,000 gallons, topping the second largest con-

Average Per Car Consumption of Taxed Gasoline

	1930 Taxed Gasoline Gallonage	1930 Mean Auto. Registrations Jan. 1 to Dec. 31	1930 Av. Gasoline Consump. Per Motor Vehicle (Gallons)	1929 Av. Gasoline Consump. Per Motor Vehicle (Gallons)	Change 1930 Average from 1929 Av. (Gallons)
Alabama	172,537,281	281,337	613.2	642.0	—28.8
Arizona	66,750,478	109,769	608.0	658.4	—50.4
Arkansas	128,545,469	266,666	567.1	596.4	—29.3
California	1,162,337,545	2,007,848	578.8	603.9	—25.1
Colorado	153,620,645	305,999	502.0	480.9	+21.1
Connecticut	223,296,627	329,544	677.5	634.5	+43.0
Delaware	33,778,561	55,534	608.2	587.7	+20.5
Florida	227,036,915	336,889	673.9	639.2	+34.7
Georgia	223,184,648	350,242	637.2	648.0	—10.8
Idaho	54,422,752	118,575	458.9	430.2	+28.7
Illinois	915,747,319	1,626,674	562.9	541.8	+21.1
Indiana	428,968,653	871,239	492.3	486.2	+ 6.1
Iowa	352,802,277	781,418	451.4	410.9	+40.5
Kansas	304,016,374	587,873	517.1	517.9	— 0.8
Kentucky	168,294,655	331,925	507.0	485.7	+21.3
Louisiana	184,781,753	278,075	664.5	648.0	+16.5
Maine	102,737,416	185,332	554.3	513.0	+41.3
Maryland	174,779,706	320,787	544.8	520.3	+24.5
Massachusetts	528,147,350	831,955	634.8	632.0	+ 2.8
Michigan	722,462,626	1,361,655	530.5	537.2	— 6.7
Minnesota	345,303,709	731,685	471.9	482.4	—10.5
Mississippi	135,823,574	243,552	557.6	567.9	—10.3
Missouri	431,958,060	759,140	567.7	522.6	+45.1
Montana	58,837,575	137,777	427.0	431.7	— 4.7
Nebraska	226,510,543	422,227	536.4	516.0	+20.4
Nevada	16,875,292	30,780	548.2	550.1	— 1.9
New Hampshire	62,486,940	110,531	565.3	535.9	+29.4
New Jersey	546,685,108	842,591	648.8	626.2	+22.6
New Mexico	54,385,614	81,262	669.2	631.2	+38.0
New York	1,438,582,716	2,285,494	629.4	590.5	+38.9
North Carolina	250,669,089	468,421	535.1	549.0	—13.9
North Dakota	65,643,460	185,532	353.8	396.0	—42.2
Ohio	927,036,272	1,762,988	525.8	532.8	— 7.0
Oklahoma	302,310,488	560,561	539.2	571.3	—32.1
Oregon	154,986,497	260,565	594.8	588.2	+ 6.6
Pennsylvania	928,842,534	1,743,402	532.7	620.9	—88.2
Rhode Island	86,612,980	135,216	640.5	599.3	+41.2
South Carolina	119,071,835	224,838	529.5	526.9	+ 2.6
South Dakota	87,597,064	204,685	427.9	448.2	—20.3
Tennessee	214,383,900	365,345	586.7	568.2	+18.5
Texas	738,177,457	1,357,001	543.9	594.3	—50.4
Utah	60,137,811	113,329	530.6	535.5	— 4.9
Vermont	46,998,012	89,827	522.2	490.8	+31.4
Virginia	215,501,157	381,547	564.8	529.3	+35.5
Washington	241,774,964	444,201	544.2	552.1	— 7.9
West Virginia	133,965,701	267,580	500.6	467.5	+33.1
Wisconsin	415,742,027	788,032	527.5	487.4	+40.1
Wyoming	36,175,118	61,090	592.1	585.3	+ 6.8
District of Columbia	79,984,431	154,063	519.1	513.7	+ 5.4
Total U. S.	14,751,308,978	26,512,611	556.3	556.4	— 0.1

3 GRAPHS *Showing How Increased Compression*

. . . INCREASES POWER

. . . LOWERS HEAT TO COOLING WATER

. . . AND LOWERS EXHAUST TEMPERATURES

BECAUSE pressure raises the temperature inside cylinders before ignition, it is a commonly accepted idea that high compression engines present a heat problem.

Such is not the case. The waste heat of a high compression engine is less than that of a similar engine of lower compression ratio.

Obviously this is so, since when an equal amount of fuel is burned in each type, the higher compression motor converts a greater percentage of the fuel energy to power, leaving less heat to be dissipated through cooling systems and exhaust.*

These conclusions of theory are borne out by experimental practice. During several years the experiments made in Ethyl Engineering Laboratories have indicated this result, and data are now available from a series of tests which illustrate the point conclusively.

The accompanying graphs are made from tests of a typical eight cylinder engine.

In Figure 1 the power of the engine is plotted with the use of three different heads to give compression ratios of 5.2 to 1, 6.0 to 1, and 7.0 to 1 (having compression pressures of 104 pounds, 130 pounds, 171 pounds, respectively). The differences in the percentage of power increases at different speeds are due largely to the use of planed heads to secure higher compression and do not exist if combustion chambers are correctly proportioned.

Figures 2 and 3 present the lower heat losses resulting from a more efficient use of energy. The cooler temperatures which the higher compression ratios maintain at given r.p.m. (because of their higher power output) become increasingly important as speed increases. The lower exhaust gas temperatures which accompany high compression ratios are of importance both because of the lower temperatures imposed on the exhaust valves and because of the smaller amount of heat transmitted from the exhaust pipe to the driving compartment during hot weather.

Body-designing engineers will also find the curves in Figure 3 par-

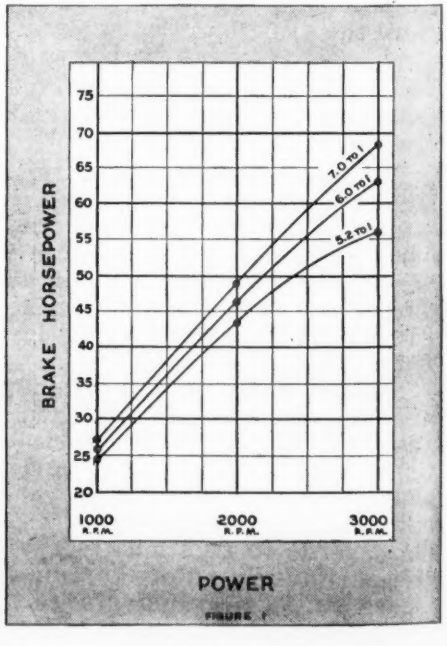
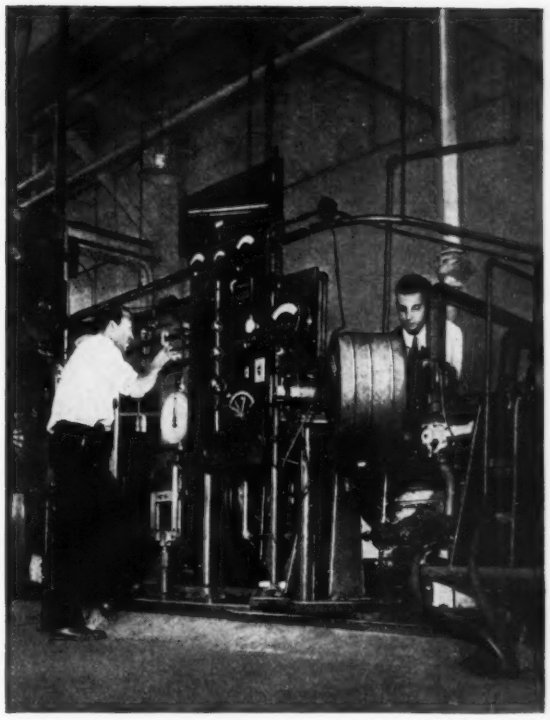


FIGURE 1

This assumes the use of fuel of sufficient anti-knock value to prevent detonation in each engine.



In this heat balance experiment, the temperature of exhaust gases is measured by a thermocouple pyrometer. The amount of heat absorbed by cooling water is measured by sensitive thermometers which indicate the temperature of the water upon entering and leaving the cooling jacket, and by scales which weigh the amount of water passing through. The torque is measured by an electric dynamometer. The speed is measured by an electrically operated revolution counter and a stop watch.

ticularly attractive. Higher compression pressures hold a promise for them of radiators of smaller area even with motors of increased power. This will be of even greater importance in aviation, where air resistance of the frontal area has a marked effect on performance.

A large number of high compression cars are now on the road. These cars operate without detonation on the Ethyl Gasoline commercially available on every highway in the country, and their performance is far superior to that of cars having the usual average compression.

A manufacturer who desires the increased efficiency of high compression motors but distrusts the available supply of a fuel which will operate without detonation is running from a shadow. There are now over 250,000 pumps in the country that bear the Ethyl emblem. Approximately five million motorists already use Ethyl Gasoline regularly, and the number is growing rapidly.

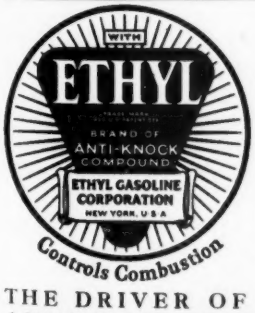
With the public demanding more power, faster acceleration and favoring low sales prices, the compression pressures of 1932 models seem certain to be higher. And if the present success of cars developing superior performance is an indication, those manufacturers who take best advantage of the compression pressures permissible with Ethyl Gasoline will be rewarded by increased sales. Ethyl Gasoline Corporation, Chrysler Building, New York City.

© E. G. C. 1931

ETHYL GASOLINE

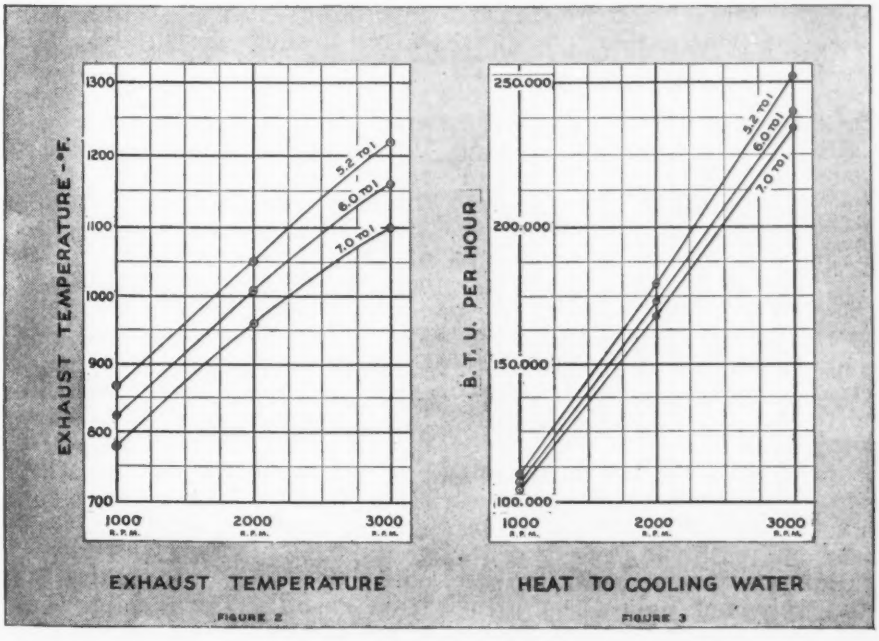
The active ingredient used in Ethyl fluid is lead

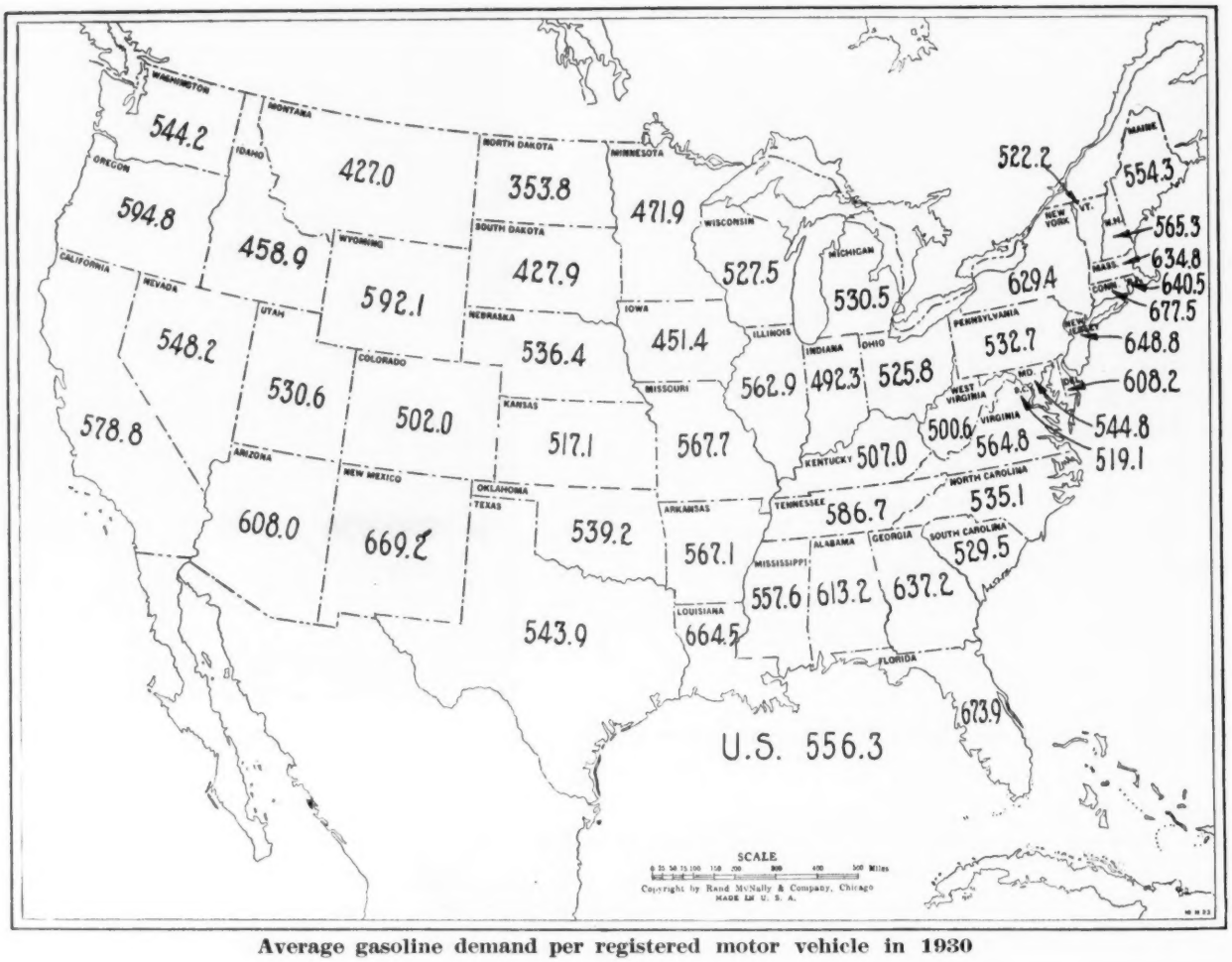
FIGURE 1 shows the relative brake horsepower of the engine (at three ratios of compression) for speeds between 1000 and 3000 r.p.m. Figure 2 shows the temperatures of exhaust gases in degrees Fahrenheit taken by a thermocouple in the exhaust pipe. Figure 3 shows the amount of heat absorbed by cooling water in British Thermal Units per hour.



The Ethyl emblem on any pump stands for tested gasoline of Ethyl quality. Constant inspection of gasoline taken from Ethyl pumps throughout the country guards this standard. Ethyl Gasoline is always colored red.

THE DRIVER OF ANY CAR ANYWHERE IS NEVER FAR FROM ETHYL GASOLINE





Average gasoline demand per registered motor vehicle in 1930

suming state, California, by more than a quarter billion gallons. The shrinkage in Pennsylvania demand caused taxed gallonage in that state to fall below the bilion-gallon mark which it passed in 1929.

The exemption refunds listed in an accompanying table do not account for all tax free gasoline. In Connecticut 9,349,546 gallons were exempted from tax payments at the time of purchase. In New Jersey 96,681,081 gallons were exempted when bought. In Utah jobbers and distributors were granted exemption on 1,227,178 gallons as a 2 per cent allowance for handling losses. In New York refunds were given distributors on 14,768,200 gallons as a 1 per cent allowance for handling. This gallonage, however, is reported in the New York state total.

In Maine 5,939,400 gallons of motor fuel carried only a 1 cent tax because it was not to be used on public highways. This gallonage was in addition to that reported under the principal gasoline tax.

Idaho reported 173,975 gallons used for aviation, compared with 54,422,752 gallons in motor vehicles. Refunds paid on other gasoline in Idaho amounted to $272,542 but the gallonage has not been stated and cannot be ascertained from the bureau's report, because gasoline carried a 4-cent tax to March 1, and 5 cents thereafter.

Receipts under the tax law, in addition to the regular taxes, amounted to $818,203 for the United States. This sum included the 1 cent tax on part of the gasoline used in Maine, $126,398 collected under an extra tax of 2 cents a gallon in Harrison county and 3 cents in Hancock county, Mississippi, and $299,591 back taxes collected in Pennsylvania.

Twenty-nine states reported tax collection costs amounting to $1,102,187. The other states pay for collection out of other state funds. The highest collection cost was in Pennsylvania, $278,875. The lowest collection cost paid directly from gasoline tax receipts was $3836 in Utah.

Of the tax receipts $13,404,200 was diverted to public school funds as follows: Florida $3,783,949; Georgia $2,238,477, and Texas $7,381,774. Miscellaneous diversions amounted to $2,131,856. Some of these items were: $50,227 in Arkansas for support of state highway commissioner's office; $8421 for aviation in Idaho; $155,178 in Louisiana for dock board; $75,000 for oyster propagation in Maryland; $35,350 in Michigan for an aviation fund; $207,440 in Mississippi for a sea wall in Harrison and Hancock counties; $90,000 in New Jersey for the free bridge commission and department of navigation and commerce, and $3000 for public utility commission, and $1,471,314 in New York to New York City funds, possibly streets.

Road distribution of receipts was: state highways $338,927,564; local roads $96,225,637; state and county road bond payments $31,049,036, and city streets $11,842,930.

Ohio ranked first in tax payments in 1930, the payments exceeding $37,000,000. Cali-

No MORE time out for PUNCTURES!

This new tube prevents 95% of all flats and adds miles of life to your tires.

SUPPOSE this were one of your trucks. A ten-penny nail has just gone clear through both tire and tube. Change Tires? Delay? Expense? No indeed. The driver will simply pull out the nail and go on his way.

There's no flat tire, no leakage of air because the truck is equipped with Firestone Puncture-Proof Tubes.

Firestone Puncture-Proof Tubes are not an experiment. They are making expensive delays a thing of the past for hundreds of truck owners. Just two instances:

On more than 1500 vehicles, operating in 12 different cities, Firestone Puncture-Proof Tubes reduced the number of flats from one in each two thousand miles, to one in each twenty thousand miles.

Tests made on 34 urban coaches showed a total of only 45 flats in three and a half million tire miles, or an average of only one flat in each eighty thousand tire miles.

It will pay you to phone your Firestone dealer today. Ask him to show you a Firestone Puncture-Proof Tube. Specify Firestone Gum-Dipped Tires, Firestone Puncture-Proof Tubes and Firestone Rims when you purchase new equipment.

HOW IT WORKS:
(A) Added to the tube is a half moon of springy gum rubber (B) which is turned inside out (C) and forced up into the tire, when inflated. This gum rubber quickly springs together preventing even a nail-hole from causing leakage of air.

Firestone

PUNCTURE PROOF TUBES

TIRES · TUBES · BATTERIES · RIMS · BRAKE LINING · ACCESSORIES

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Comparison of Taxed Gasoline Gallonage

(Gallonage Figures from U. S. Bureau of Public Roads)

	Tax Rate 1930 Jan. 1	Tax Rate 1930 Dec. 31	Net Taxed Gallons 1930	Net Taxed Gallons 1929	Gain or Loss 1930 from 1929 Gallons	Gain or Loss 1930 from 1929 Per Cent
Alabama	4	4	172,537,281	178,162,903	— 5,625,622	— 3.1
Arizona	4	4	66,750,478	63,995,783	+ 2,754,695	+ 4.3
Arkansas	5	5	128,545,469	133,620,566	— 5,075,097	— 3.7
California	3	3	1,162,337,545	1,139,736,244	+ 22,601,301	+ 2.0
Colorado	4	4	153,620,645	141,466,891	+ 12,153,754	+ 8.6
Connecticut	2	2	223,296,627	202,354,590	+ 20,942,037	+10.3
Delaware	3	3	33,778,561	31,198,248	+ 2,580,313	+ 8.3
Florida	6	6	227,036,915	223,373,467	+ 3,663,448	+ 1.6
Georgia	6	6	223,184,648	219,609,473	+ 3,575,175	+ 1.6
Idaho	4	5	54,422,752	48,658,984	+ 5,763,768	+11.8
Illinois	3	3	915,747,319	845,000,000	+ 70,747,319	+ 8.3
Indiana	4	4	428,968,653	410,936,759	+ 18,031,894	+ 4.4
Iowa	3	3	352,802,277	311,859,516	+ 40,942,761	+13.1
Kansas	3	3	304,016,374	288,716,546	+ 15,299,828	+ 5.3
Kentucky	5	5	168,294,655	154,717,831	+ 13,576,824	+ 8.8
Louisiana	4	5	184,781,753	176,645,631	+ 8,136,122	+ 4.6
Maine	4	4	102,737,416	91,610,422	+ 11,126,994	+12.1
Maryland	4	4	174,779,706	157,429,197	+ 17,350,509	+11.0
Massachusetts	2	2	528,147,350	487,940,778	+ 40,206,572	+ 8.2
Michigan	3	3	722,462,626	710,300,302	+ 12,162,324	+ 1.7
Minnesota	3	3	345,303,709	338,631,771	+ 6,671,938	+ 2.0
Mississippi	5	5	135,823,574	140,902,401	— 5,078,827	— 3.6
Missouri	2	2	431,958,060	384,033,575	+ 47,924,485	+12.5
Montana	5	5	58,837,575	57,514,249	+ 1,323,326	+ 2.3
Nebraska	4	4	226,510,543	208,869,358	+ 17,641,185	+ 8.4
Nevada	4	4	16,875,292	16,307,535	+ 567,757	+ 3.5
New Hampshire	4	4	62,486,940	56,676,294	+ 5,810,646	+10.2
New Jersey	2	3	546,685,108	498,063,808	+ 48,621,300	+ 9.8
New Mexico	5	5	54,385,614	45,479,332	+ 8,906,282	+19.6
New York	2	2	1,438,582,716	1,283,500,000	+155,082,716	+12.1
North Carolina	5	5	250,669,089	260,210,528	— 9,541,439	— 3.6
North Dakota	3	3	65,643,460	71,591,708	— 5,948,248	— 8.3
Ohio	4	4	927,036,272	910,154,885	+ 16,881,387	+ 1.9
Oklahoma	4	4	302,310,488	314,388,292	— 12,077,804	— 3.8
Oregon	4	4	154,986,497	152,090,900	+ 2,895,597	+ 1.9
Pennsylvania	4	3	928,842,534	1,047,914,175	—119,071,641	—11.4
Rhode Island	2	2	86,612,980	77,826,879	+ 8,786,101	+11.2
South Carolina	6	6	119,071,835	118,038,130	+ 1,033,705	+ 0.9
South Dakota	4	4	87,597,064	88,644,138	— 1,047,074	— 1.1
Tennessee	5	5	214,383,900	194,497,225	+ 19,886,675	+10.2
Texas	4	4	738,177,457	761,421,692	— 23,244,235	— 3.0
Utah	3½	3½	60,137,811	56,546,967	+ 3,590,844	+ 6.3
Vermont	4	4	46,998,012	43,990,554	+ 3,007,458	+ 6.8
Virginia	5	5	215,501,157	197,898,821	+ 17,602,336	+ 8.9
Washington	3	3	241,774,964	233,333,570	+ 8,441,394	+ 3.6
West Virginia	4	4	133,965,701	121,654,788	+ 12,310,913	+10.1
Wisconsin	2	2	415,742,027	374,251,957	+ 41,490,070	+11.1
Wyoming	4	4	36,175,118	34,242,816	+ 1,932,302	+ 5.6
District of Columbia	2	2	79,984,431	71,409,032	+ 8,575,399	+12.1
Total U. S.	3.35 Av.		14,751,308,978	14,177,420,000	+573,888,978	M 4.0

Comparison of Net Gasoline Taxes and Exemption Refunds

(Figures from U. S. Bureau of Public Roads)

	Net Gasoline Taxes Collected 1930	Net Gasoline Taxes Collected 1929	Exemption Refunds Granted 1930	Exemption Refunds Granted 1929
Alabama	$ 6,901,491	$ 7,105,009	.....	.....
Arizona	2,670,019	2,559,831	$ 341,825	$ 326,772
Arkansas	6,427,273	6,681,029	275,000	.....
California	34,870,126	34,192,087	3,733,682	3,408,021
Colorado	6,144,826	5,217,479	689,372	527,582
Connecticut	4,465,933	4,047,092	.....	.....
Delaware	1,013,357	935,947	58,006	44,612
Florida	13,622,215	12,203,056	.....	.....
Georgia	13,391,079	10,224,108	.....	.....
Idaho	2,668,582	1,945,980	272,542	258,997
Illinois	27,472,420	11,659,778	1,139,849	.....
Indiana	17,158,746	15,610,251	1,088,332	818,960
Iowa	10,584,068	9,355,785	1,209,384	713,046
Kansas	9,120,491	8,171,205	1,732,530	1,562,170
Kentucky	8,414,733	7,742,564	.....	.....
Louisiana	7,546,448	6,978,651	844	1,048
Maine	4,109,496	3,708,682	237,575	132,794
Maryland	6,991,188	6,297,168	293,929	235,250
Massachusetts	10,562,947	9,758,816	158,717	129,914
Michigan	21,673,879	21,309,009	2,109,429	2,249,068
Minnesota	10,359,111	8,892,125	1,073,575	739,026
Mississippi	6,791,177	7,045,120	.....	.....
Missouri	8,639,161	7,680,672	262,008	185,933
Montana	2,941,879	2,802,017	931,834	965,720
Nebraska	9,060,422	7,799,479	89,062	60,567
Nevada	675,012	652,301	69,603	60,206
New Hampshire	2,499,478	2,267,052	90,355	65,854
New Jersey	11,342,896	9,961,276	.....	.....
New Mexico	2,719,281	2,273,966	.....	.....
New York	28,476,290	19,055,174	1,060,146	433,248
North Carolina	12,533,454	12,006,384	640,610	499,801
North Dakota	1,969,304	1,799,226	1,435,908	1,169,144
Ohio	37,081,451	34,082,188	1,941,853	1,658,919
Oklahoma	12,092,420	10,841,609	832,101	29,033
Oregon	6,198,777	4,542,602	588,518	346,284
Pennsylvania	33,315,729	35,747,314	166,880	140,189
Rhode Island	1,732,259	1,542,759	44,514	13,779
South Carolina	7,144,310	6,866,608	18,635	29,343
South Dakota	3,503,882	3,545,765	1,645,413	1,134,388
Tennessee	10,719,195	9,290,853	.....	.....
Texas	29,527,098	22,317,494	2,814,401	775,208
Utah	2,104,823	1,979,226	.....	.....
Vermont	1,879,921	1,703,091	.....	.....
Virginia	10,775,058	9,894,941	651,008	524,480
Washington	7,253,249	5,943,039	698,338	518,067
West Virginia	5,358,628	4,866,192	257,298	195,380
Wisconsin	8,314,841	7,485,039	442,714	382,860
Wyoming	1,447,005	1,296,299	.....	.....
District of Columbia	1,599,689	1,428,181	11,081	9,573
Total U. S.	$493,865,117	$431,311,519	$29,106,861	$20,345,236
Increase	62,553,598		8,761,625	
Percent of increase	14.5		43.0	

fornia was second and Pennsylvania third. In 1929 Pennsylvania was first, California second and Ohio third.

NEW EQUIPMENT

Universal Pump & Tank Corp., Cleveland, O. has announced an improved rectangular oil tank for which it claims as chief features, distinctive appearance, better alignment in batteries; ruggedness and a pump which matches the tank.

The beveled top edges, diepressed paneled sides of the tank and electrically baked finish, add to the appearance of the tank, the company says. The border of panels is slightly dished, only the outer edge contacting the adjoining tank. Indented panels prevent bulging of sides at center.

The tank is one-piece and welded. A Universal pump provides accuracy, ease of action and lasting service. The one-piece tank is standard equipment on 30 and 60-gallon rectangular oil tanks with return and non-return drain type pump.

Other equipment the company is making include air-operated flushers for transmissions and differentials. This equipment cleans old grease out by high vacuum and pressure agitation inside the gear case. Outstanding features of flushers and the Greseter (grease eater) are light weight, no moving parts, only one hose to handle, ruggedness and economy.

* * *

The DeVilbiss Co., Toledo, O., has designed a spray-painting outfit to be operated by one man. It is called the DeVilbiss NK-606, is electrically operated and is of light and durable construction. It can be transported from place to place in an ordinary automobile.

It is for use at service stations, garages, office buildings and such places. Insecticides and such liquids can be sprayed with this device also.

Typical trackage station with small investment in equipment. This station is in St. Louis, operated by the Vulcan Spring Co., Richmond, Ind., and named after the St. Louis office manager of the spring company

THE TANK CAR STATION

Depends on business from individual car owner, not commercial accounts

CLEVELAND

TANK car service stations look to the individual car owner for business. The other major division of gasoline users, commercial accounts, in the main remain with established oil companies.

Limitations of the tank car station are recognized by operators as preventing competition with oil jobbing companies, for commercial accounts. These are: the physical set-up without trucking facilities, lack of extension of credit to buyers, and the narrower margins which prevent granting discounts.

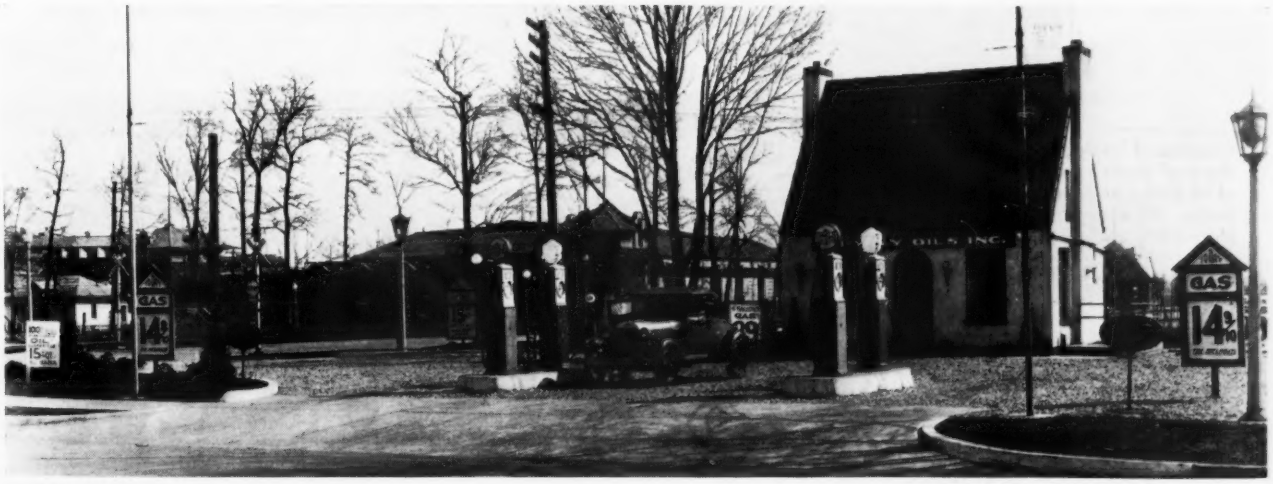
Thus of the entire field of retail gasoline buyers the tank car station must seek its business primarily from the individual car owner. But even this field is not wide open to the tank car station.

For many years our industry has regarded the individual car owner customer as coming under two general groupings. One group bought the regular grade. The other bought premium motor fuel, paying 2 or 3 cents a gallon more for high-test or anti-knock qualities.

To this classification a third group is added. This is the price buyer, and here the tank car station seeks business. In various cities where tank car stations have widened the retail market into three price levels, established jobbing companies have competed for the price buyer's patronage by reducing regular gasoline prices, or by third pumps.

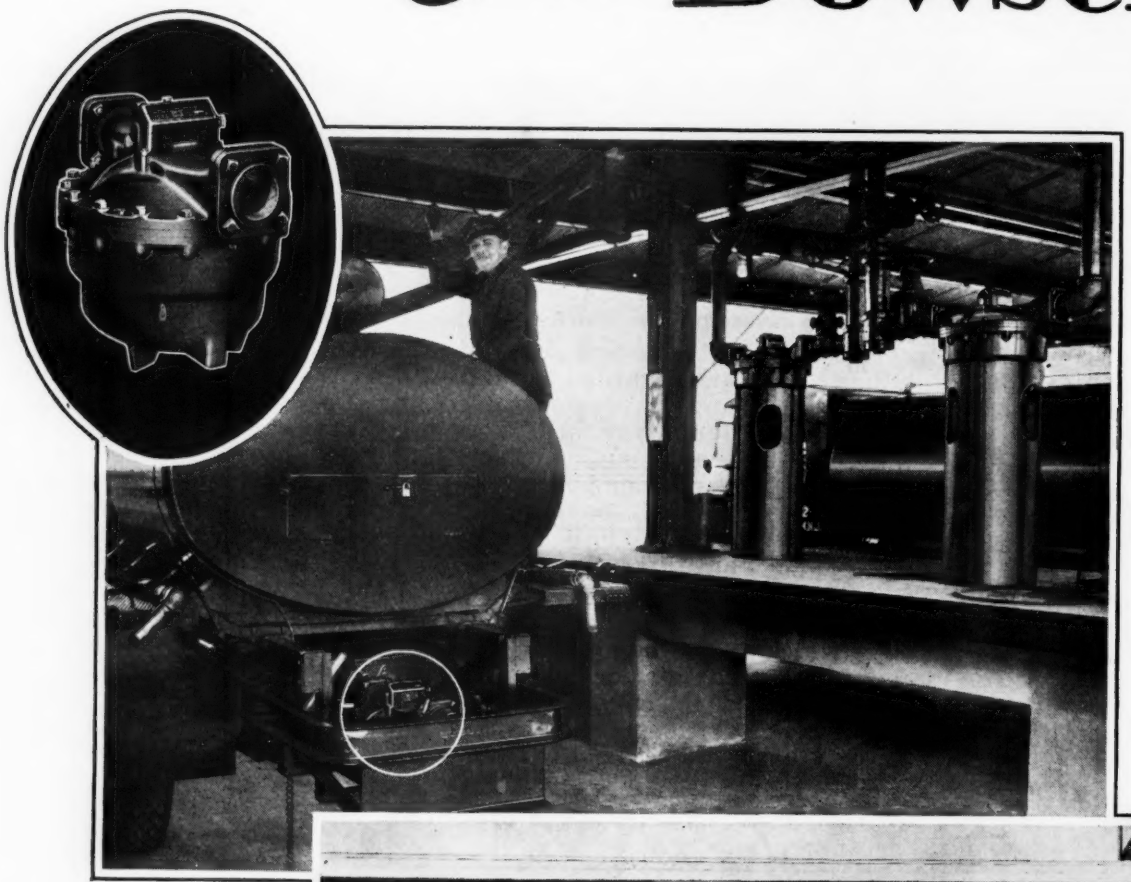
Further recognition was given to a three-part classification of gasoline customers recently by one of the largest oil companies adopting as a permanent marketing policy a third brand of gasoline to appeal to the price buyer.

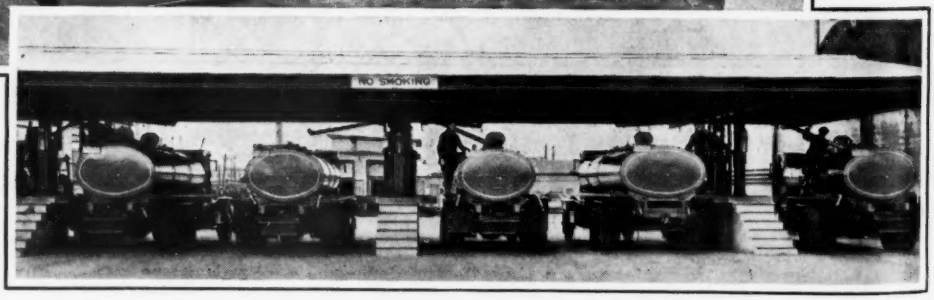
So our industry's retail price structure now recognizes three levels of buyers. There is an upper level buying quality merchandise regardless of prices on other gasolines; paying the top



An Indianapolis trackage station of more pretentious design. This station, operated by Hi-Way Oils Inc., is in a good residential section near the fair grounds

Another for Bowser





Close-up of loading rack, showing 2 of the 6-3" Xacto's and one of the fleet of 19 trucks, each equipped with 1-3" Xacto. View at right shows the complete plant, where XACTO METERS triumphed in checking 17,708,585 gallons of gasoline with a loss of only 6/100 of 1 per cent.

S.F. BOWSER &

WESTERN DIVISION:
425 BRANNAN STREET
SAN FRANCISCO, CALIFORNIA

1302-1322 E. CREIGHTON AVENUE
LONDON BERLIN

Triumph

Xacto Meters!

17,708,585

Gallons of Gasoline Checked "into and out of" the Above Fleet of 19 Tank Trucks by 25 BOWSER XACTO METERS with a variance of less than 6/100 of 1 per cent

Think of it! Nearly 18 million gallons of gasoline—handled in thousands of separate operations—over a period of 11 months—from one large bulk plant, into and out of a fleet of 19 delivery units—each and every operation checked and recorded so accurately and completely, by **25 BOWSER XACTO METERS,** that only 6/100 of 1 per cent of the total volume was unaccounted for.

Think of the combined advantages—the protection from losses—the economy—the convenience—the efficiency—the saving in time and labor, that such a THOROUGH and COMPLETE CHECK will effect in the handling of YOUR bulk gasoline.

Consider the value of these advantages, individually:

At the Bulk Plant---a complete and continuous inventory of stocks on hand—an accurate check on each loading operation—an instant check on total output—a complete and reliable record of each commodity movement.

On Tank Trucks---a positive and complete check on individual and total deliveries—a check on each loading and unloading operation—partial compartment dumps—establishment of fixed delivery routes.

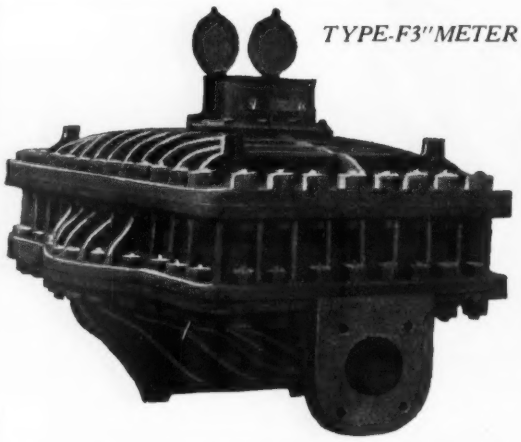
Investigate XACTO METER ECONOMIES—the big advantages of its CHECK on your gasoline movements, from receipt to disbursement—every gallon guarded all the way.

The Trend is to BOWSER XACTO METER Checking Systems

COMPANY, INC.,

FORT WAYNE, INDIANA, U. S. A.
PARIS ROTTERDAM

S. F. BOWSER COMPANY, Ltd.,
52-68 FRASER AVENUE
TORONTO, ONTARIO, CANADA



TYPE-F3" METER

LOADING RACKS
TANK CAR UNLOADING
TANK TRUCKS
WHARF SERVICE
ETC.

TABLE OF GRANBERG METER SIZES AND CAPACITIES*

Type and Size	Capacity Gals. per Minute	Working Pressures
C – 1" Bronze	3 – 25	45 – 60
D – 1½" Bronze (Light Case)	12 – 50	25 – 30
D – 1½" Bronze (Heavy Case)	12 – 50	50 – 70
DS – 1½" Bronze (For Truck)	12 – 80	50 – 70
ET – 2" Bronze (For Truck)	20 – 120	12 – 15
E – 2" Cast Iron	20 – 160	55 – 75
F – 3" Cast Iron	50 – 350	150

*Note the wide range of flow.

Literature mailed on request

GRANBERG METER CORPORATION
79 New Montgomery St., San Francisco, Calif.

AQUA SYSTEMS, INC., Distributors—2 Lafayette St., New York City
OILMEN'S SERVICE AND SUPPLY CO., Distributors—142 Berkeley St., Boston, Mass.
NATIONAL PUMPS CORP., Dayton, Ohio, Manufacturers of Granberg Meter Equipped Retail Pumps

For Sale

FUEL OIL STATION

The United States of America, represented by the United States Shipping Board, acting by and through the United States Shipping Board Merchant Fleet Corporation, invites sealed bids for the purchase of its Fuel Oil Station, of 110,000 barrel capacity, located at Honolulu, T. H.

Bids, which must be on prescribed form, will be received by the Director of Supplies, Merchant Fleet Corporation, Room 1713, Navy Building, 19th Street & Constitution Avenue, N. W., Washington, D. C., until 2 p. m., Eastern Standard Time, June 15, 1931. The right is reserved to reject any and all bids. For Sales Proposal S.D. No. 81, terms and conditions of sales, and form of bid, communicate with

Director of Supplies
UNITED STATES SHIPPING BOARD
MERCHANT FLEET CORPORATION,
Room 1713, Navy Building,
WASHINGTON, D. C.

price for one or more of the three general qualities of gasoline, anti-knock, ease in starting, or mileage.

The middle group pays some attention to price. It wants quality merchandise but is not willing to pay the top price. This group is represented by the buyers of what is commonly termed regular or competitive grade gasoline.

Then there is the lower group, buying primarily on price. Quality of course is desired, but the price tag is the determining factor in a decision to buy gasoline.

The tank car station has fitted itself into the third group. Sails have been trimmed to sell on a narrower margin, with the price appeal offsetting advantages of advertising and a nationally advertised brand name.

While the tank car station has set out to sell in this lower bracket, some stations have gone after business from the middle, and even into the upper, brackets. These stations have attractive buildings, good locations, trained and uniformed attendants, and have watched closely the quality of the gasoline in order to induce customers from the two upper levels to buy.

The division lines between these various buying levels are not hard and fast. A customer is in a definite level when he buys gasoline, but from one purchase to the other it is possible to shift.

The head of a jobbing company in Louisville, for example, estimates that in his city 50 per cent of the car owners are in the upper level, 25 per cent in the middle, and 25 per cent in the lower. This estimate is based on today's economic conditions.

Economic status of the customer, compression ratio of the auto, and his prejudices on gasoline affect his decision to come into a certain level. The man with employment and steady income in 1928 may have been a quality gasoline buyer then, but out of work now, with limited resources, he is forced by circumstances to save a penny or so in buying gasoline.

The attitude of the car owner towards his automobile also has a direct bearing in determining the price level. An illustration supplied by an executive of a

major oil company illustrates the point.

"Watch the men driving to work some morning around a big industrial plant," he began. "There will be plenty of old rattle-trap cars, outliving the time they were due for the junk heap, yet there they are, taking four or five men to work. You would think those cars would be unsafe in traffic.

"But those four or five men riding in that car probably live in the same neighborhood, and work in the same industrial section. Instead of each driving his own car, or riding the street car, they chip in about $10 apiece, buy the cheapest second hand car for transportation to work.

"Obviously this car represents transportation. It was bought to take these men to and from work at the least possible cost. The original price was low, and, in order to keep upkeep at a low level, gasoline, oil and lubrication will be purchased where prices are lower. How are you going to sell this car on quality products?"

And it is possible that some men riding to work together in a community second hand car have first class autos in their garage, and for their own personal cars they buy in the second or first level rather than on a price basis.

The automobile engine also has a voice in the decision as to what gasoline to buy. A car with a high compression motor, for example, may be driven by an owner wanting to buy on price. Yet to obtain performance this owner may be forced to forego his price buying desire in favor of a high anti-knock gasoline at the top retail price.

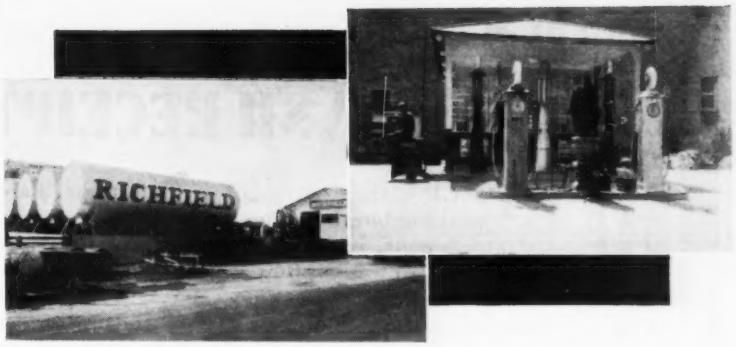
Oil men recognize that business conditions today have affected the gasoline buyer. This is aside from our industry's problem of over-production and its consequent effect on the oil market. Men out of work have to conserve their money; those with employment may be pinching in against a possible loss of the job, while others are followers of the fad of "it's smart to be thrifty."

The tank car station naturally seeks its market in the larger centers of population where there are more motor

COMPLETE BULK PLANTS
STORAGE TANKS
UNDERGROUND TANKS
LOADING CANOPIES

FILLING STATION BUILDINGS
GREASE RACKS
BRASS VALVES

AIR COMPRESSORS
GASOLINE PUMPS
STEEL BUILDINGS
TANK PAINT
GENERAL PLATE WORK



STEEL STORAGE TANKS . .

Over 50,000 Birtanks are now in use by leading oil companies.

We furnish (and when desired, erect) complete filling stations . . . . including all-steel building, storage tanks, pumps, lube oil outfits, air compressors and all accessories.

In addition to the smaller size tanks for filling stations, Birtank installations include complete bulk plants—storage tanks and supports, pump house, warehouse, loading canopy, piping, pumps and accessories.

Birtanks Are The Standard Of Quality

Sales Offices: Birmingham, Tulsa, Tampa, Charlotte, Verona, Pa., New York, New Orleans, Jackson, Miss.

We fabricate for the oil industry special work such as bubble towers, field storage tanks and condenser boxes. For further information and prices, write to Birmingham Tank Company, Birmingham, Ala., or Verona, Pa., or any of the sales offices shown at the left.

AN INGALLS BIRTANK PRODUCT

Birmingham Tank

OIL & GASOLINE DISTRIBUTION EQUIPMENT

HIGH GRADE PETROLEUM PRODUCTS

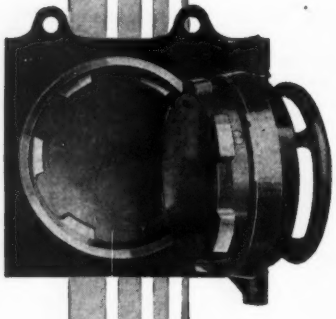
Made by the Oldest Pennsylvania Oil Refiners

CYLINDER STOCKS, (Filtered and Unfiltered).
MOTOR OILS—to match any specification.
High Grade Burning Oils.
300° Mineral Seal and Railroad Oils.
High Grade Transformer Oils.

A. D. MILLER SONS' COMPANY
PITTSBURGH, PA.

REAL SAFETY FOR YOUR CASH RECEIPTS

IMAGINE the feelings of an ambitious, hard-working burglar when he breaks into your establishment, only to find that all the cash is safely reposing in a York Round Door Chest. If he has been around at all, he knows that he might as well "call it a day" right then for even the most expert cracksmen have never been able to open one of these sturdy safes. Rough methods like using a sledge hammer don't help a bit—which explains why so many large companies find a decided decrease in attempted robberies of their establishments after adopting the York Chest.



The York Chest, when installed, is anchored in a solid concrete block, giving complete protection against fire. It cannot be removed from the building or attacked at any point except the heavy, thief-proof door. The saving in burglary insurance alone will pay for the York Chest in a reasonable length of time.

Illustrated folder describing the York Round Door Chest in detail will be sent gladly on request.

YORK SAFES

YORK SAFE & LOCK CO.

York, Pennsylvania

TURN YOUR USED EQUIPMENT INTO CASH!

by advertising it in the classified section of *National Petroleum News.*

$4 an inch with border and display heading. Without border 10 cents a word, minimum charge $3.

Send in your "ad" today

cars and consequently more gasoline customers. And volume is the prime necessity since the tank car station makes a smaller margin on each gallon sold and looks to many sales to show the profit and loss account in black ink.

Some tank car stations have been operated in small towns, even down to 10,000 population. In one mid-western city of 25,000 population a tank car station was opened four years ago. In the first full calendar month this station sold 120,000 gallons of gasoline. In February, 1931, this station sold 34,000 gallons, about its normal business after the first flush wore off and the station was adjusted to local market conditions.

But in the main the tank car station has been a big city proposition, in the mass market where large quantities of gasoline are purchased daily by the public.

Within each city the tank car station has its own problems in reaching its market. Since each city is distinctive in its lay-out no hard and fast rule can be deducted, but the present tank car station set-up indicates several general trends.

These are the relation of railroad locations in conjunction with through traffic highways, and the relation of possible locations in connection with the various types of residential sections.

Most cities have a network of railroads cutting across many sections. There will be several trunk lines passing through or entering the city, and in addition there are the belt railroads connecting the trunk lines. The present tank car station set-up shows that location has been decided by following the various railroad lines and seeking the most advantageous street crossing.

One large city of 1,500,000 population has one or more tank car stations on every main traffic highway from the retail district into residential sections, excepting one, and this street has a tank car station completed but not opened. In several cases there are two stations at the point where the railroad crosses the highway.

The development of a city has a bearing also in locating the

various classes of buyers, and the physical lay-out that provides suitable locations for tank car stations. Again no rule can be laid down as each city is a market study in itself. A few examples will illustrate the point.

Detroit is representative of a city that has developed rapidly, in this case through the automotive industry. In place of well defined residential sections and real estate developments Detroit is a jumble. There are several sizeable better class residential sections, but the percentage of residences in these sections is not nearly as large as in other cities of the same population classification.

Travel out some main highway into the residential section, and a cross section of the entire city will be obtained. Without warning the main highway will cut across several fine residential streets with the better type homes. But just beyond may be a cheap apartment house district. Sometimes the line of separation will be sharply defined, with expensive homes on one cross street, and the next street will contain tenement houses.

Thus the quality, middle class and price buyer are well mixed over the city. The quality buyer with a fine motor car may live back of the home of a price buyer with a 1925 vintage used car.

Executives of oil companies in Detroit point out that rapid development of the city brought about this condition. As a result the tank car station may not have a well defined class of buyers in its neighborhood. Adjacent to the station the neighborhood may be retail business or a given residential section, but farther up there may be fine homes, and these people too are flowing past the station. Thus a station seemingly backed by a price buying or middle class group may also have a generous number of high salaried automobile owners in the same trade area.

Cincinnati is another city with peculiar traffic conditions. This city is built on hills. Main traffic routes are in the valleys. So are the railroads. On the surface it would seem that this condition would approach the ideal in forcing traffic up one main

"This sorta thing burns me up"

"Believe me, there was fireworks poppin' around here the other day. That breezy new jobber salesman workin' this beat tried to put something over on me.

"My two-quart Brookins was about ready to be retired, so I told this bird to send me another one like it. And when it came in, it wasn't a Brookins at all. Looked like a Brookins, all right —if you didn't look too close. But it didn't have the heft or the finish or the *stuff* in it. Dam! I saw red. I won't try to foist off any imitation on my customers. And I won't let anybody do it to me.

"I've got my new Brookins all right. But that fresh salesman better not come around *here* again."

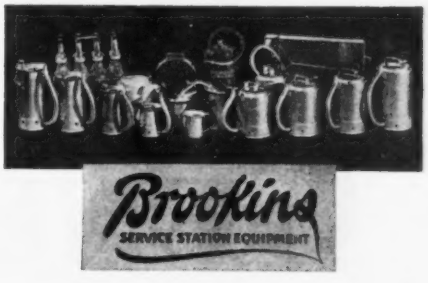
—BILL

Bill's right, of course,—even tho he isn't very delicate about it. Substitutes are generally goat-getters. They may save a few cents in first cost, but they're more expensive in the end.

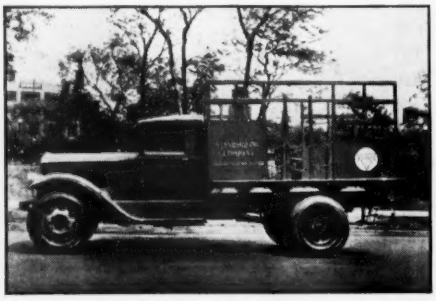
Insist on the Brookins trade-mark stamped into the equipment you buy. It's your guarantee of satisfaction and long life. If you'd like the proof, we'd be glad to see that you get it.

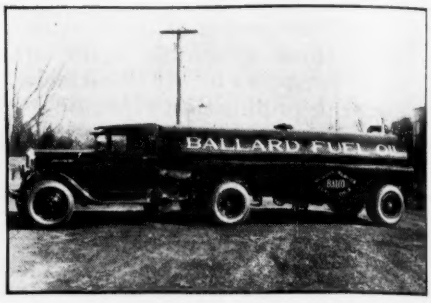
THE BROOKINS MFG. CO.
700 Hawthorne St.,
DAYTON, OHIO

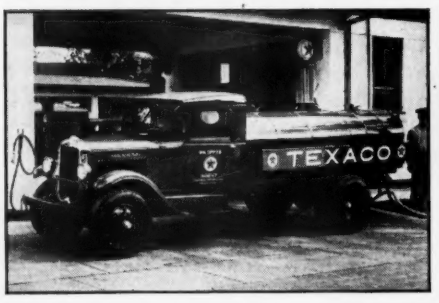
"Satisfying aids to satisfying service"

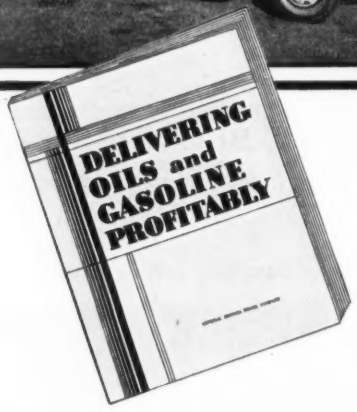


In POWER . . .
SPEED . . . PRICE . . .









NOTE—The coupon will bring you a copy of this printed, illustrated report of a national, unbiased survey of trucks *on the job*, in distribution of oils and gasoline. The facts, figures, methods and suggestions it contains may help you obtain substantially increased profits from each of your trucks. Mail the coupon now. No cost or obligation.

GENERAL MOTORS

RUGGEDNESS . . .

Today's Outstanding TRUCK VALUES!

IN the service of leading oil companies throughout the country General Motors Trucks are writing impressive performance records. That is because each transport unit is exactly fitted to its work.

There is now a modern 6-cylinder General Motors Truck accurately suited in power, speed and ruggedness for virtually any *truck job in your industry.*

A nation-wide, impartial survey by this company brought to light the truck operating problems of oil and gasoline distribution. It disclosed practical methods to meet those problems—to make trucks produce more profits.

This survey helped equip our field organization to co-operate effectively with the individual distributor in making his *present* trucks earn more—in selecting new equipment exactly suited to its work.

The survey placed in the hands of our engineers valuable data on the requirements of truck design and construction demanded by the operating problems of your industry.

As a combined result, modern, 6-cylinder General Motors Trucks offer the oil industry today's outstanding truck VALUES—*General Motors* Values! That name tells you that every advance—*of proved merit*—is found in these fast, powerful, sturdy transport units. *See them!*

GENERAL MOTORS TRUCK COMPANY, Pontiac, Michigan
(*Subsidiary of* Yellow Truck & Coach Mfg. Co.)
GENERAL MOTORS TRUCKS, YELLOW CABS and COACHES.
Factory Branches, Distributors, Dealers—in over 2200 principal cities and towns. (*Time payments financed through our own* Yellow Manufacturing Acceptance Corporation, *at lowest available rates.*)

GM
A PRODUCT OF GENERAL MOTORS
TRUCKS

GENERAL MOTORS TRUCK COMPANY,
Dept. 313, Pontiac, Mich.
Gentlemen: Please send, without cost or obligation, a copy of "Delivering Oils and Gasoline Profitably."

Name.....

Address.....

.....

highway in each valley instead of allowing it to scatter as on flat land.

Many of these valleys, however, are narrow. There is little room for anything besides the railroad tracks and the highway. In fact, one Cincinnati tank car station operator studied a potential valley location for two years before seeing his way clear to erect a station.

Where the city attracts one tank car station operator, it also attracts others. But since locations are limited by the requirements of a railroad crossing and a good highway the tank car stations are limited in their selection.

Thus, the business available to tank car stations in a given community may be divided among the existing stations, and further divided when other stations come in. So far tank car stations have not encroached to any great extent on the immediate neighborhood of another tank car station.

Whether subsequent tank car stations in a general neighborhood obtain their business from existing tank car stations, or whether they bring new business from drive-in service stations is unknown on account of the shifting character of the gasoline buyer.

In one case the second tank car station is credited with bringing in new buyers. A tank car station, in a large mid-western city, was built across the street from another tank car station already enjoying a large volume of business. The highway was one of the principal thorofares to a good residential community.

Daily gallonage records of the first station did not show any falling off of business following the opening of the second tank car station. Operators of both companies, interviewed separately, told the same story. Since the highway was well traveled each tank car station pulled in business not available to the other as the customer could not drive across traffic.

A tank car station operator in another city estimated that drive-in stations in his neighborhood profited by his station. True, he may have taken business away from the drive-in stations, but new customers were attracted to the community and some of them may have been won over by the drive-in stations, he claimed.

New Stations Building

Note: Material used in this column is taken principally from newspapers. NATIONAL PETROLEUM NEWS assumes no responsibility for its accuracy. Headquarters of companies and addresses of individuals are given wherever possible.

The list as published from week to week cannot be looked upon as indicative of the relative extent to which stations are being built in various parts of the country.

Service Stations

Whiting, Ia.—F. A. Wood, Sloan, Ia.
New Sharon, Ia.—E. M. Criss.
Fairbank, Ia.—John Hoffman.
Fort Dodge, Ia.—Continental Oil Co., Ponca City, Okla.
Burlington, Ia.—Fred C. Britton.
Nebraska City, Neb.—Emil Rink, S. Eleventh St.
Shelbina, Mo. — Harry Revercomb, Highway 36 and 15.
New Sharon, Ia.—E. M. Criss.
El Paso, Tex.—J. R. Turner, 521 Texas St.
Meade, Kan.—Continental Oil Co., Ponca City, Okla.
Tulsa, Okla.—Marathon Oil Co., Tulsa, Okla.
Arena, Wis.—Ray Porter and Russell Reeves.
Quincy, Mich.—Circle Oil Co.
Butler, Ind.—Mrs. Walter Johnson, Main and Broadway.
Douglas, Neb.—R. C. Hunt.
Manitowoc, Wis.—James Neely, Tenth and York Sts.
Hudson, Wis.—Chas. Stiles, 2nd and Buckeye Sts.
Anderson, Ind.—James Casto, Main and Twelfth Sts.
Morrison, Ia.—Members Mutual Oil Corp.
Chariton, Ia. — Tank Car Service Corp., Creston, Ia.
Fargo, N. D.—Withnell Oil Co., 1st Ave. and 9th St., Moorhead, Minn.
Kansas City, Mo.—Burnie Phillips Tire Co., 17th and McGee Sts.
Simmons, Mo.—Albert Smith.
Clayton, Mo.—Lubrite Refining Co., St. Louis, Mo.
Decorah, Ia.—Williard Gaul.
Waukon, Ia.—Bert Klinkel.
Hartwick, Ia.—Fred Bees.
Waterloo, Ia.—H. L. Ernst, 118 Eighteenth St. W.
Waterloo, Ia.—C. E. Howard, Fifth St. and Grand Ave.
Elgin, Ill.—Bernard Giertz, Spring St. and Dexter Ave.
Brookfield, Ill.—John Kairis, Fairview and Maple Aves.
Bronx, N. Y.—Sylbert Gas Stations, Inc., Third Ave. and 138th St.
Centralia, Ill. — Phillips Petroleum Corp., Phillips Bldg., Bartlesville, Okla.
Montpelier, Ind. — Alva Garringer, Huntington and Columbia Sts.
Fairmount, Ind.—Harry Winslow.
Decatur, Ill.—Lincoln Oil Refining Co., Robinson, Ill.
Baltimore, Md. — Atlantic Refining Co., 260 S. Broad St., Philadelphia, Pa.
Hatton, N. D.—Hatton Co-operative Oil Co.
Roosevelt, R. I.—Harry Weissman.
Warwood, W. Va.—Gulf Refining Co., Frick Bldg. Annex, Pittsburgh, Pa.
New Ulm, Minn.—Emil G. Hempel.
La Crosse, Wis.—Henry J. Ahrens. 4th St. between Pine-Badger Sts.
Baltimore, Md.—James H. Easton, 41st. St. & Falls Rd.
Sharon, Pa.—Sterling Oil Co., Emlenton, Pa.
Baltimore, Md. — Northwest Real Estate Co.
Kewanna, Ind.—Thomas Herd.
Amityville, N. Y.—Calvin Perry Ketcham Ave. and Ireland Place.
Jamaica, N. Y.—East Floral Park Corp., Inc., 224-37 to 223-47 Rocky Hill Rd.
Richmond Hill, N. Y.—Cooper Gasoline Stations, Inc., Jamaica Ave. and Elderts St.
Queens Village, N. Y.—Abraham M. Siegel, 214-28 to 214-36 Hillside Ave.
Queens Village, N. Y.—Michael Shanley, 207th. St. and Hillside Ave.
Kendall, Wis.—Collins-Domes Oil Co., Inc.
Gridley, Ill.—George Young.
Morrocco, Ind.—D. Spangler.
Winnetka, Ill.—518 Winnetka Ave., Standard Oil Co., Neodesha, Kan.
Rochester, Ind.—McCall & Pontious, Main & Fourth Sts.
Covington, Tenn.—George Peeler and Hayes Moore, Liberty Ave. & Jefferson Davis Rd.
Columbus, O.—Standard Oil Co., East Ohio Gas Bldg., Cleveland.
Columbiana, O.—Standard Oil Co., East Ohio Gas Bldg., Cleveland.
Toulon, Ill.—Theodore Bradford, East Main and Miller Sts.
Hartford, Wis.—Howard Gerger and George Grissman.
Millersburg, O.—Paul Rumbacher E. Jackson and Crawford Sts.
Auburn, N. Y.—Edward J. Flunn.
Wayne, Neb.—Deep Rock Oil Co., 1018 S. Wabash Ave., Chicago, Ill.
St. Paul, Minn.—Frank A. Lebra, 191 E. 8th St.
Litchfield, Ill.—Phillips Petroleum Co., Bartlesville, Okla., to build five stations between Litchfield and Pana, Ill.
Fremont, Neb.—John Mundy, Second and D. Sts.
Neillsville, Wis.—J. D. Cummings, Grand Ave.
Sandusky, O.—Standard Oil Co., East Ohio Gas Bldg., Cleveland, O.
Racine, Wis.—Wadhams Oil Co., 359 Clinton St., Milwaukee, Wis.
Rockfort, Ind.—Horace Sohn, Sycamore St.
Baltimore, Md.—Sun Oil Co., 1428 S. Penn Sq., Philadelphia, Pa.
Rensselaer, Ind.—Standard Oil Co., 910 S. Michigan Ave., Chicago, Ill.
Tama, Ia.—Walter Carpenter.
Chariton, Ia. — Tank Car Service Corp., Creston, Ia.
Morrison, Ia.—George Lynch.
Oskaloosa, Ia.—Farmers' Bureau Association.
Eagle Grove, Ia.—O. H. McCoy.
Nerstrand, Minn.—Nerstrand Oil Co.
Gillespie, Ill. — Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.
Beltrami, Minn.—Erling Prestby, St. Hilaire, Minn.
Emmetsburg, Ia.—Kenneth Bradley.
Moline, Ill.—W. H. Christison, 1405 23rd Ave.
Boone, Ia.—A. Nathan, F. M. Ballou, and Whitlock Auto Supply Co., 8th & Arden Sts.
St. Paul, Minn.—Smith Tire & Battery Co., 4th & Market Sts.
Mt. Clair, Ill.—Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.
Iola, Ill.—Ernest Jacobson.
Foley, Minn.—Skelly Oil Co., Skelly Bldg., Tulsa, Okla.
Warwood, W. Va.—Gulf Refining Co., Frick Bldg. Annex, Pittsburgh, Pa.
Sioux Falls, S. Dak. — White Eagle Oil Co., 1400 Federal Reserve Bank Bldg., Kansas City, Mo.
Staunton, Ill. — Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.
St. Paul, Minn. — John Cline and James Robinette, 131 Edward St.

Crude Production by Fields

By Telegraph—Daily average gross output, by fields in U. S., for week ending with dates below as compiled by A. P. I.

PRODUCTION SUMMARY

	May 9	May 2
Production east of Rockies	1,930,400	1,948,600
Decrease		18,200
Total production in U. S.	2,468,700	2,475,100
Decrease		6,400
Crude oil imports	110,715	147,430
Decrease		36,715
Total new crude supply	2,579,415	2,622,530
Decrease		43,115

OKLAHOMA

	May 9	May 2
Allen Dome	11,750	10,700
Asher	650	700
Asher, West	7,000	7,500
Blackwell	2,900	2,900
Bowlegs	14,500	15,000
Braman	1,900	1,900
Bristow-Slick	12,250	12,200
Burbank	13,200	13,100
Carr City	11,400	13,350
Cromwell	5,250	5,250
Cushing	13,200	13,200
Davenport	900	900
Duncan Dist.	6,250	6,550
Earlsboro	19,050	19,450
Earlsboro, E.	15,600	16,400
Earlsboro, So.	6,450	6,150
Garber	4,050	4,050
Graham	4,150	4,150
Healdton	10,850	10,500
Hewitt	6,100	6,050
Hubbard	950	950
Konawa	9,400	8,850
Little River*	25,550	24,200
Little River, E.	5,950	5,200
Logan Co.	3,650	3,650
Maud	2,350	2,450
Mission	7,450	8,100
Oklahoma City	222,200	159,550
Okmulgee, No.	9,150	9,150
Okmulgee, So.	4,950	4,950
Osage (Outside Burbank)	21,200	21,300
Papoose	2,150	2,150
Pearson	550	550
Sasakwa	2,500	2,500
St. Louis	20,400	23,850
Scholem-Alechem	13,250	13,100
Searight	4,250	4,200
Seminole	13,300	13,500
Seminole, East	1,450	1,600
Thomas	600	600
Tonkawa	6,200	6,200
Wewoka	8,950	10,150
Yale-Jennings	6,100	6,100
Others	48,000	48,200
Total, Okla.	607,850	551,050
Increase		56,800

KANSAS

Augusta-Fox Bush	2,900	2,850
Churchill	3,050	3,050
El Dorado-Towanda	12,550	12,500
lorence-Covert	750	750
Greenwood Co.	15,850	15,900
Oxford	2,150	2,150
Peabody-Elbing	1,900	1,850
Rainbow Bend	1,450	1,450
Ritz	6,650	6,150
Russell	3,200	3,150
Sedgwick Co.	17,650	17,300
Voshell	17,650	16,700
Others	22,850	23,600
Total, Kans.	108,600	107,400
Increase		1,200

NORTH LOUISIANA

Caddo, light	7,350	7,450
Caddo, heavy	2,800	2,750
Cotton Valley	1,850	1,750
De Soto and Red River	2,700	2,700
Haynesville	5,700	6,000
Holly	550	550
Homer	3,250	3,300
Sarepta Carterville	1,250	1,150
Urania	4,500	4,550
Zwolle	8,350	7,350
Others	1,500	1,500
Total, N. La.	39,800	39,050
Increase		750

ARKANSAS

Champagnolle	2,950	2,900
El Dorado	3,650	3,600
Lisbon	750	750
Nevada	1,000	1,000
Smackover, light	4,250	4,200
Smackover, heavy	31,600	31,600
Stephens	850	850
Others	1,900	1,950
Total Ark.	46,950	46,850
Increase		100

ROCKY MOUNTAIN

Wyoming

Big Muddy	1,900	1,900
Elk Basin	700	750
Grass Creek 6	1,950	2,100
Labarge	1,000	1,100
Lance Creek	200	200
Lost Soldier	4,000	4,000
Oregon Basin	1,400	1,400
Rock River	1,950	2,000
Salt Creek	24,450	26,450
Others	3,850	3,850
Total, Wyo.	41,400	43,750
Decrease		2,350

Montana

Cat Creek	1,050	1,000
Pondera	1,550	1,750
Sunburst	4,400	4,450
Others	1,400	1,450
Total, Mont.	8,400	8,650
Decrease		250

Colorado

Florence	350	550
Fort Collins	1,000	950
Moffat (Craig)	900	1,000
Others	1,700	1,750
Total, Colo.	3,950	4,250
Decrease		300

New Mexico

Artesia	550	500
Bal. Eddy Co.	400	200
Hobbs High	31,500	34,800
Bal. Lea Co.	4,200	4,200
Hogback	450	450
Rattlesnake	1,100	1,100
Table Mesa	100	100
Total, N. M.	38,300	41,350
Decrease		3,050
Total, Rocky Mountain	92,050	98,000
Decrease		5,950

TEXAS (OUTSIDE GULF COAST)

Panhandle District

Carson Co.	4,400	4,550
Gray Co.	41,950	43,600
Hutchinson Co.	8,300	7,900
Wheeler Co.	200	250
Others	850	200
Total, Panhandle Tex.	55,700	56,500
Decrease		800

North Texas

Archer Co.	11,850	11,850
Burkburnett	6,500	6,500
Electra	8,900	8,900
Iowa Park and K. M. A.	3,750	3,700
Montague-Cooke	5,300	5,400
Wilbarger	10,350	9,900
Young Co., No.	9,750	9,800
Others	1,200	1,150
Total, N. Tex.	57,600	57,200
Increase		400

West Central Texas

Brown Co.	3,500	3,700
Callahan Co.	2,300	1,500
Coleman Co.	1,800	1,800
Eastland-Desdemona	3,700	3,800
Jack Co.	1,100	1,100
Palo Pinto Co.	350	300
Shackleford Co.	3,750	3,600
Stephens Co.	4,500	4,600
Throckmorton Co.	350	400
Young Co., So.	3,300	3,300
Others	900	1,050
Total, West Cen. Tex.	25,550	25,150
Increase		400

West Texas

Crane and Upton Cos.	24,200	23,900
Crockett Co.	1,750	1,750
Ector Co.	7,000	7,400
Howard Co.	29,250	30,200
Jones Co.	1,400	1,200
Michell and Scurry Cos.	2,000	1,950
Reagan Co.	19,400	19,650
Winkler Co.	44,950	44,400
Yates	70,900	70,650
Bal. Pecos Co.	4,600	4,550
Others	7,150	7,000
Total, West Texas	212,600	212,650
Decrease		50

East Central Texas

Boggy Creek	2,000	2,050
Corsicana-Powell	4,550	4,550
Currie	300	300
Mexia	3,400	3,400
Nigger Creek	150	150
Richland	100	100
Van Zandt	43,650	39,650
Wortham	550	500
Others	50	50
Total, East Cen. Texas	54,750	50,750
Increase		4,000

East Texas

Rusk County: Joinerfield	95,750	83,850
Kilgore	120,900	187,200
Gregg County: Longview	52,250	68,700
Total, East Texas	268,900	339,750
Decrease		70,850

Southwest Texas

Chapman Abbott	3,800	4,000
Dale	300	300
Darst Creek	18,650	20,800
Laredo Dist.	13,400	13,800
Luling	8,700	9,200
Lytton Spgs.	700	700
Salt Flat	11,900	11,900
Somerset	1,300	1,300
Others	250	500
Total, S. W. Texas	59,000	62,500
Decrease		3,500
Total, Texas (Outside Gulf Coast)	734,100	804,500
Decrease		70,400

GULF COAST

Coastal Texas

Barbers Hill	30,350	29,500
Batson	1,000	1,000
Big Creek	3,000	3,150
Blue Ridge	1,300	1,300
Boling	650	700
Damon Mound	1,400	1,250
Esperson	2,150	2,200
Fannett	450	500
Goose Creek	4,150	4,200
Hankamar	2,150	2,500
Hull	6,500	6,350
Humble	9,800	9,450
Moss Bluff	350	550
No. Dayton	650	650
Orange Co.	1,950	1,450
Orchard	1,100	1,950
Pettus	7,400	7,550
Pierce Junct.	8,200	8,300
Port Neches	1,400	1,400
Raccoon Bend	8,300	8,550
Refugio Co.	31,500	32,800
Saratoga	1,000	1,000
Somerville	2,300	2,350
Sour Lake	2,200	1,950
So. Liberty	2,000	2,000
Spindletop	9,100	9,400
Sugarland	11,650	11,600
West Columbia	4,150	4,100
Others	1,850	2,000
Total, Coastal Texas	158,000	159,700
Decrease		1,700

Coastal Louisiana

Edgerly	350	450
Evangeline	700	800
Hackberry, E.	1,800	1,850
Hackberry, Old	750	800
Lake Barre	2,200	2,300
Lockport	8,350	7,350
Port Barre	1,800	2,000
Sulphur Dome	2,450	1,700
Vinton	5,700	6,300
White Castle	2,250	1,800
Others	4,350	5,000
Total, Coastal La.	30,700	30,350
Decrease		350
Total, Gulf Coast	188,700	190,050
Decrease		1,350

CALIFORNIA

Dominguez	11,700	11,700
Elwood-Goleta	35,500	35,700
Huntington Beach	21,000	21,000
Inglewood	15,500	15,500
Kettleman Hills	32,500	26,100
Long Beach	88,200	87,600
Midway-Sunset	55,000	54,000
Playa del Rey	29,800	28,800
Santa Fe Spgs.	73,600	73,200
Seal Beach	15,600	15,600
Ventura Ave.	46,800	47,800
Others	113,100	109,500
Total, Calif.	538,300	526,500
Increase		11,800

EASTERN

(Not including Mich.)	103,850	103,100
Increase		750

MICHIGAN

Mt. Pleasant	6,600	6,700
Muskegon	1,750	1,750
Saginaw	150	150
Total, Mich.	8,500	8,600
Decrease		100

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations, Week Ended May 8 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended May 8
Plants Reporting	10	23	23	10	10	76
Da. Av. Cap. (Bbls.)	94,000	162,500	107,400	71,500	60,700	496,100
Da. Cracking Capacity	53,200	64,600	23,100	26,250	31,700	198,850
Da. Av. Crude Runs	58,491 — 0.9	108,133 — 1.2	56,606 — 10.0	38,860 + 48.0	43,408 — 8.6	305,498 — 3.9
Da. Av. Other Oil	6,627 + 34.4	2,224 — 52.0	997 — 60.8	3,762 + 3918.7	17,656 + 8.7	31,266 + 9.9
GASOLINE—Gallons						
Stocks, May 1	27,970,000	49,291,000	35,314,000	13,042,000	4,893,000	130,510,000
Prod. 5-1 to 5-8	11,411,000 + 3.0	16,689,000 — 5.5	8,571,000 — 3.3	3,927,000 + 2.5	5,932,000 — 15.5	46,530,000 — 4.0
Ship. 5-1 to 5-8	12,040,000 + 16.4	17,215,000 + 6.1	11,993,000 + 29.6	3,155,000 + 1.4	6,440,000 — 17.3	50,843,000 + 8.8
Stocks, May 8	27,341,000 — 2.2	48,765,000 — 1.1	31,892,000 — 9.7	13,814,000 + 5.9	4,385,000 — 10.4	126,197,000 — 3.3
Ratio Sales to Prod.	105.5%	103.2%	139.9%	80.3%	108.6%	109.3%
KEROSINE—Gallons						
Stocks, May 1	7,700,000	13,700,000	2,031,000	35,000	370,000	23,836,000
Prod. 5-1 to 5-8	1,690,000 — 24.0	2,303,000 + 7.4	758,000 — 32.2	....	320,000 + 12.3	5,071,000 — 12.8
Ship. 5-1 to 5-8	1,830,000 + 1.9	2,550,000 — 1.2	872,000 — 14.3	6,000 — 40.0	336,000 + 50.0	5,594,000 — 0.6
Stocks, May 8	7,560,000 — 1.8	13,453,000 — 1.8	1,917,000 — 5.6	29,000 — 17.1	354,000 — 4.3	23,313,000 — 2.2
Ratio Sales to Prod.	108.3%	110.7%	115.0%	.....	105.0%	110.3%
STOVE DISTILLATE—Gallons						
Stocks, May 1	1,283,000	5,477,000	738,000	133,000	50,000	7,681,000
Prod. 5-1 to 5-8	330,000 + 5.4	439,000 — 30.8	229,000 — 28.9	16,000 — 54.3	53,000 — 31.2	1,067,000 — 22.7
Ship. 5-1 to 5-8	914,000 + 43.9	2,000 — 91.7	216,000 — 10.4	17,000 — 26.1	45,000 — 28.6	1,194,000 — 0.7
Stocks, May 8	699,000 — 45.5	5,914,000 + 8.0	751,000 + 1.8	132,000 — 0.8	58,000 + 16.0	7,554,000 — 1.7
Ratio Sales to Prod.	277.0%	4.6%	94.3%	106.3%	84.9%	111.9%
GAS OIL—Gallons						
Stocks, May 1	3,864,000	31,726,000	3,203,000	4,195,000	8,542,000	51,530,000
Prod. 5-1 to 5-8	921,000 + 21.8	3,612,000 + 17.2	484,000 + 54.3	491,000 — 49.2	2,372,000 — 9.9	7,880,000 — 7.3
Ship. 5-1 to 5-8	554,000 +361.7	2,400,000 +298.6	503,000 — 45.0	238,000 — 11.9	2,508,000 + 31.7	6,203,000 + 62.8
Stocks, May 8	4,231,000 + 9.5	32,938,000 + 3.8	3,184,000 — 0.6	4,448,000 + 6.0	8,406,000 — 1.6	53,207,000 + 3.3
Ratio Sales to Prod.	60.2%	66.4%	103.9%	48.5%	105.7%	78.7%
FUEL OIL—Gallons						
Stocks, May 1	13,016,000	53,175,000	62,988,000	18,570,000	19,920,000	167,669,000
Prod. 5-1 to 5-8	4,907,000 — 2.1	6,230,000 + 11.8	5,829,000 — 14.3	5,839,000 + 24.3	4,656,000 + 9.3	27,461,000 + 4.3
Ship. 5-1 to 5-8	4,320,000 — 4.7	6,528,000 + 22.3	5,745,000 — 10.7	4,695,000 + 38.6	4,797,000 — 11.6	26,085,000 + 3.9
Stocks, May 8	13,603,000 + 4.5	52,877,000 — 0.6	63,072,000 + 0.1	19,714,000 + 6.2	19,779,000 — 0.7	169,045,000 + 0.8
Ratio Sales to Prod.	88.0%	104.8%	98.6%	80.4%	103.0%	95.0%

Gasoline Produced by Various Methods, Week Ended May 8

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,235,000	54.6	11,256,000	67.4	5,662,000	66.1	3,491,000	88.9	3,106,000	52.4	29,750,000	63.9
Cracked	4,565,000	40.0	4,607,000	27.6	1,996,000	23.3	309,000	7.9	2,190,000	36.9	13,667,000	29.4
Natural	611,000	5.4	826,000	5.0	913,000	10.6	127,000	3.2	636,000	10.7	3,113,000	6.7
Total	11,411,000		16,689,000		8,571,000		3,927,000		5,932,000		46,530,000	

+ or — columns are % change over previous week.

Mid-Continent Gasoline Stocks Again Lowered

Staff Special—By Telegraph

TULSA, May 12

MID-CONTINENT refiners that report their operating statistics to NATIONAL PETROLEUM NEWS reduced gasoline stocks 4,300,000 gallons in the week ended May 8. Shipments were 4,100,000 gallons larger than in the preceding week and output was 1,700,000 gallons less because daily average crude oil runs were cut 17,500 barrels.

Crude runs were curtailed in all districts but West Texas which also was the only district that failed to lower gasoline inventories.

Kerosine stocks were reduced 520,000 gallons and distillate stocks 130,000 gallons. Gas oil stocks were increased 1,600,000 gallons and fuel oil stocks 1,300,000 gallons.

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended May 8. Change in stocks figures from April 10.

GASOLINE

	Gallons
Production	193,155,000
Shipments	194,687,000
Net change in stocks	—1,532,000
Ratio sales to production	100.7%

KEROSINE

	Gallons
Production	22,337,000
Shipments	24,221,000
Net change in stocks	—1,884,000
Ratio sales to production	108.4%

STOVE DISTILLATE

	Gallons
Production	5,583,000
Shipments	6,223,000
Net change in stocks	—640,000
Ratio sales to production	111.5%

GAS OIL

	Gallons
Production	27,859,000
Shipments	19,575,000
Net change in stocks	+8,284,000
Ratio sales to production	70.3%

FUEL OIL

	Gallons
Production	110,872,000
Shipments	98,760,000
Net change in stocks	+12,112,000
Ratio sales to production	89.1%

California Standard Enlarges «Competitive» Area After Trial in Two Districts

LOS ANGELES, May 8

IN ADOPTING a "competitive price" policy throughout its Pacific Coast marketing territory, Standard of California put the mark of approval on an experiment initiated in the San Francisco and Oakland districts two weeks ago as an aid in eliminating price-cutting competition.

While cut-price signs continue to exist in these test areas, the new policy resulted in an increase in gallonage estimated at between 10 and 15 per cent. The average retail price was approximately 10 cents, or one cent under the standard price established for the areas.

At the close of the week ended May 2, the company introduced its competitive price signs in the northwest territories of Tacoma, Seattle, Spokane and Portland, and on May 4 announced a similar policy in southern California.

Not all of the company's service stations, operated through its marketing subsidiary Standard Stations, Inc., are included in the competitive policy. It is only in instances where cut-price signs are posted within a block or two of a Standard station that the regular-price signs are withdrawn in favor of "competitive prices."

Although the regular price in southern California—the hot-bed of present unstable marketing conditions—is 10.50 cents, a majority of stations in the area have been posting prices over a range of 8.50 to 9.50 cents.

With no prices posted by either Standard or Shell, and with retail prices on a par with prices prevailing at neighborhood stations, it is expected that the average price in the Los Angeles Basin will approximate 9 to 9.50 cents.

Shell Service, Inc., is the only other major Pacific Coast marketing company to follow Standard's method of meeting neighborhood competition. Associated Oil Co. took its regular signs down but permitted service station operators to meet prices posted in the immediate vicinity. Other companies are reported to have increased their marginal spread to independent resellers to permit them to compete on an even basis.

Several of the larger marketing companies indicated they would not follow the competitive price policy because, in their opinion, it does not come within provisions of the Code of Ethics. Others can not see their way to seek increased gallonage at the profitless prices. Executives of these companies believe the trend will be to post prices at stations in neighborhoods infested with cut-price signs, rather than leave price fixing to the discretion of the individual service station operator.

During the past week a large service station in Hollywood, handling Associated products, put on a publicity stunt by advertising gasoline at 5 cents per gallon. It was necessary to call out a special detail of police to handle the rush of cars that tied up traffic on an 80-foot boulevard.

After maintaining this price from noon of one day until noon of the next, it was raised to 7.50 cents, its present level. It was estimated that during the rush period 1200 and 1500 gallons of gasoline per hour was pumped.

Termination of existing retail market disturbances on the Pacific Coast is thought to rest on the success of various proposals suggested as a means of regulating California's future crude production within the limits of actual demand.

With approximately 200,000 barrels of the state's daily production reported pledged to the recently organized Oil Producers Sales Agency, a co-operative marketing organization, final efforts were made during the past week to get actual signatures and to interest the larger hold-outs.

A meeting of the board of directors of this organization will be held early in the coming week to hear a new report on production potentials from California fields. A resurvey of these potentials was requested by the agency, when a report submitted by the State Advisory Committee was not accepted.

Tentative programs for reducing the state's daily allowable from its present figure of 500,000 barrels have been submitted to directors of the agency for consideration. Although the proposals range from an allowable of 450,000 to 490,000 barrels per day, it is conceded that the latter figure will find the greatest support among interested operators when it is put to a vote.

Daily average production for the state was estimated at 536,600 barrels for week ended May 8. This was an increase of 10,000 barrels over the output of a week ago and was due to unusually large completions in the Kettleman Hills and Ventura Avenue fields.

This agency plan together with a tentative one that would bind large and small purchasing companies in the state into a workable unit, and the legislative act of Senate Bill 362 now before the State Assembly at Sacramento, comprise the other measures looked to as a means of stabilizing the local industry.

Bill 362, as passed by the Senate, provides for the appointment of a board of five oil and commissioners by the Governor, but it is expected that some modification of this point will be introduced before the act is voted on by the Assembly.

Gas Development Active In Eastern Fields

CLEVELAND, May 7.—The most active field in the Appalachian oil and gas region this spring is in Tioga county, Pa., gas field, where 37 strings of tools are running. This field is near Wellsboro. The major operators in the field are: Lycoming Natural Gas Co., Pittsburgh; Benedum & Trees, Pittsburgh; North Penn Gas Co., Port Allegheny, Pa., and S. A. Brendell, Canal Fulton, O.

Ten strings of tools are running in the Schuyler county, N. Y., gas field, near Watkins Glen, where the Belmont Quadrangle Drilling Corp. is the principal operator.

The major production activities center around gas in the Appalachian region. There is comparatively little oil activity this spring. In the Bradford-Allegany field only 12 to 15 strings are running, compared with a hundred or so a year ago.

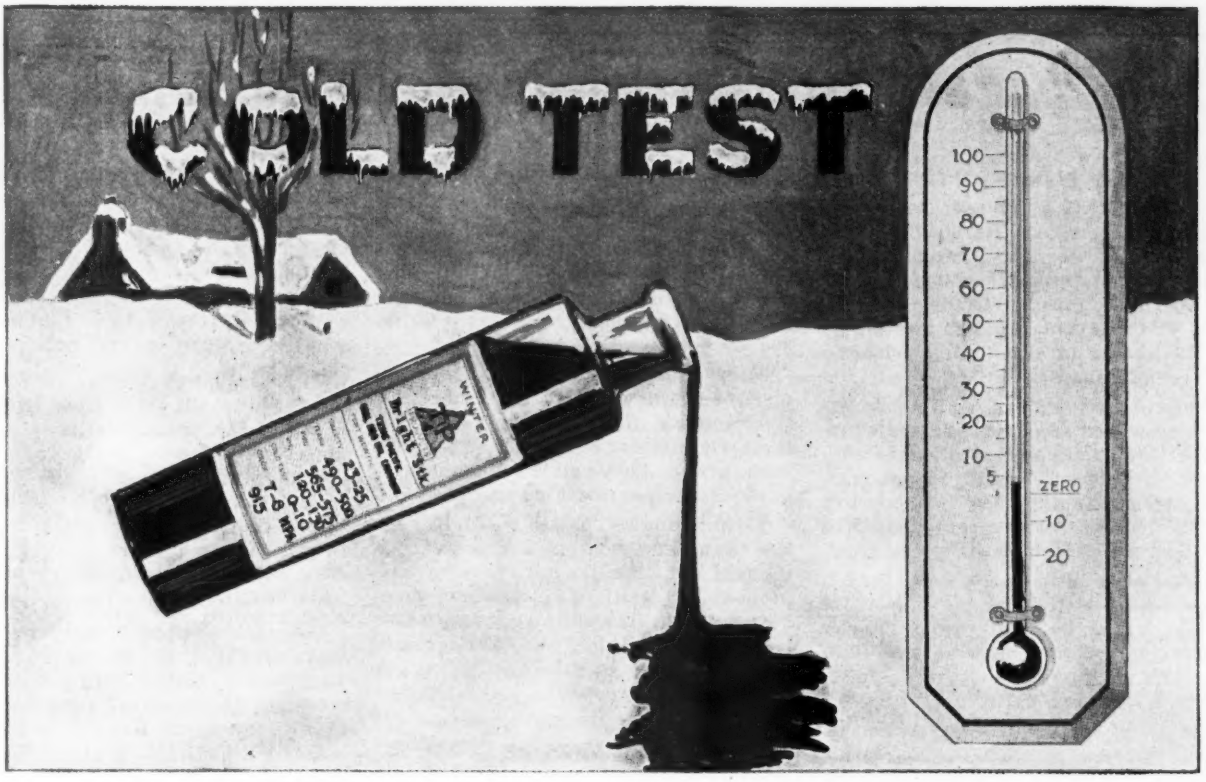
Oil production is being curtailed 50 per cent in the Bradford-Allegany field and 30 per cent in other fields of the Appalachian district. There is plenty of oil to meet current demand, operators report, but with more large distributing companies turning to Pennsylvania motor oils, a larger demand is expected later this year.

Nitro-Glycerin Snuffs Gladwater Fire

HOUSTON, May 7.—After burning eight days and causing nine fatalities, the Cole well fire of the Sinclair Oil & Gas Co., near Gladwater, East Texas, was extinguished by a shot of nitroglycerin. The shot was placed by the Kinley Brothers, Oklahoma fire fighters, at 6 p.m. May 6, after an unsuccessful attempt to snuff out the blaze earlier in the day.

Owners of the well were estimated to have sustained losses exceeding $200,000 fighting the fire, including value of the oil consumed.

The fire extinguished, workmen began skidding another derrick to the well, there to begin another fight to shut off its oil flow. When the well was completed 10 days ago it ran wild for two days before catching fire from a friction spark. Six workers on the well met death immediately and three others died later.



★

ZERO-10★

IS NOW PATENTED

Special Winter Blending Bright Stock 915W	
Gravity	23-25
Flash	490-500
Fire	565-575
Vis. @ 210	120-130
Cold Test	0-10
Color	7-8NPA
Carbon Res.	Under 1.5

★

The above ★ advertisement appearing on September 25, 1927, was our first notice to the trade of Zero-10°F. cold test Paraffin Base Lubricating Oils. These oils and methods of producing them are now protected by United States Letters Patent No. 1803941, granted to us on May 5th, 1931. Years of far-sighted research enabled us to produce these oils in spite of the common opinion that such oils could not be produced commercially. Now that our patents have been granted, we shall insist upon their recognition.

Special Winter Blending Bright Stocks 913W	
Gravity	23-25
Flash	450-460
Fire	510-520
Vis. @ 210	80-90
Cold Test	0-10
Color	6-7NPA
Carbon Res.	Under 1.5

★

TEXAS PACIFIC COAL AND OIL COMPANY

TP PRODUCTS REG. U.S. PAT. OFF.

FORT WORTH, TEXAS

★ Reproduced from Advertisement

Refinery - Tank Wagon Markets

Markets Remain Unsettled in Most Areas; Gasoline Prices Generally Lower

CLEVELAND, May 11

GENERALLY speaking, oil markets in most areas remained unsettled in the week ended May 9. Gasoline prices continued to suffer from excessive competition and the growth of the third-grade-of-gasoline plan. With their season nearing an end and industrial activity failing to pick up materially, burning oil prices also lost more ground.

Gasoline price recessions were more severe in middle western markets than they were elsewhere. The general Group 3 market for U. S. Motor slipped below 3 cents with most of the offerings at this price coming from areas outside of Group 3 itself. Oklahoma quotations ranged from 3 to 3.50 cents, the majority of offerings hovering around the lower price.

Reports from traders in the eastern half of the country indicated that jobbers were buying somewhat more liberally. A slight stiffening in prices was noted in Pennsylvania and while there were further recessions in prices along the Atlantic seaboard there was a growing feeling among traders that they had about hit bottom.

There was little change in the general market situation on the west coast. Trading was light in domestic tank car markets and bulk-market inquiries were almost wholly lacking.

The Pennsylvania market bucked the trend of motor oil markets generally. Refiners in this area reported a brisk demand for finished oils. In other areas demand was said to be light and prices lost ground.

Standard Oil Co. of New Jersey reduced its tank wagon and service station prices for gasoline 0.5 cent on May 6, but aside from this there were no changes covering large territories. There were, however, numerous local changes in various parts of the country.

U. S. Motor Moves Under 3 Cents at Chicago

Staff Special

CHICAGO, May 9

A FURTHER softening in gasoline prices was noted in the Chicago market in the week ended May 9, along with reductions in retail prices at a number of points in the middle west. However, reports on the East Texas crude oil situation were more favorable and many of the trade were of the opinion that tank car prices would shortly start moving upward. Reports current May 8 and 9 to the effect that a number of the larger marketing companies in the middle west were going to be in the market for gasoline also lent a more favorable aspect to the general situation.

Discussion among the trade continued to center around marketing a "low priced" gasoline and inquiries were numerous for gasoline not up to U. S. Motor specifications. Demand for material for blending also continued fairly active. Good grades of naphtha were reported rather hard to obtain and were bringing as much as U. S. Motor in many cases.

The spot demand for U. S. Motor was fair, while sellers reported that movement against contracts was entirely satisfactory. In some cases, the contract price was reported to be under the open market price and consequently buyers were anxious to obtain the full amounts specified in their contracts.

Several traders said they believed there would be considerably more open market buying by jobbers this summer as compared with the past few years. They believed that numerous jobbers who had been buying on contracts probably would switch to the open spot market due to the narrower margins now being offered them by refiners.

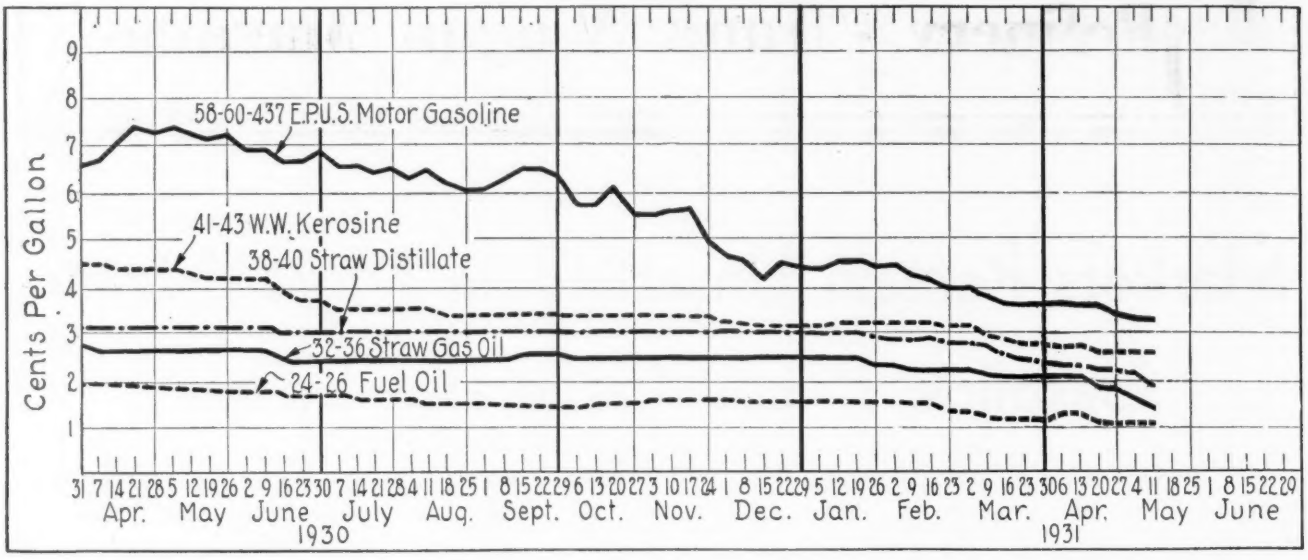
Buyers generally continued their policy of taking gasoline only when their tanks were running low and there was considerable competition for the business. Consequently, tank car prices again moved lower and were approximately 0.25 cent under those of the previous week. While there were occasional sales of U. S. Motor reported at 2.75 cents on May 9, 2.875 cents represented the lowest figure at which any considerable quantity of gasoline appeared to be moving, and most sellers still were asking at least 3 cents. Sales were reported up to 3.375 cents on May 9.

The demand for high gravity gasoline has fallen off considerably, due mostly to warm weather and to the lower spread between the tank car and tank wagon markets. Prices of all grades were lower during the week.

Kerosine was steady and without any material change in prices. Distillate was inactive and was freely offered at lower prices. Sales of 38-40 straw were reported as low as 1.75 cents. A fairly large volume of distillate from East Texas was reported coming into this territory at present.

Gas and fuel oils were sluggish and prices were lower for all grades. Some gas oil was being offered, for shipment from Texas, at prices lower than Oklahoma and Illinois-Indiana refiners were asking for 28-30 fuel oil.

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P.U.S. Motor Gasoline
41-43 W.W. Kerosine
38-40 Straw Distillate
32-36 Straw Gas Oil
24-26 Fuel Oil
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1930
1931

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Table Section of this issue

Fewer Sessions Planned For N.G.A. Meet

TULSA, May 9.—Changes in the grouping of papers on the program of the Natural Gasoline Association of America have resulted in longer and fewer sessions for the annual convention in Tulsa, May 19-21. It will be possible for many to drive to Tulsa the morning of the 19th and leave the afternoon of the 21st, saving one or two nights hotel bill.

The annual membership dinner will be held the evening of May 20. At that time the report of the nominating committee will be received and officers and directors elected. Alexander B. Morris, consulting petroleum engineer, will give, on this occasion, one of the important papers of the meeting. This is "Inter-company Consolidations of Gasoline Plants in Depleted Fields," a subject that is receiving much attention and some practical execution.

On the morning of the first day's meeting the Natural Gasoline Supply Men's Association will meet to elect directors who will later choose officers. This organization will entertain the gasoline men with lunches the first and third days, a stag smoker and entertainment the evening of the first day and a dance the evening of the second day.

A. P. I. Appoints New Members

NEW YORK.—New committee members of the American Petroleum Institute include J. O. Ffeifer, traffic manager, Gilmore Oil Co., Ltd., Los Angeles, who has been appointed a member of the Committee on Railroad Transportation of the division of marketing; also E. L. Kullmann, Wadhams Oil Co., Milwaukee, who has been appointed a member of the committee on fire prevention in marketing, to succeed T. J. Callen, Jr., resigned, according to Edward G. Seubert, Standard Oil Co. of Indiana, Chicago, chairman of the division of marketing general committee.

W. Va. Marketers Meet In June

CHARLESTON, W. Va.—The annual convention of the West Virginia Oil Marketers Association will be held here at the Daniel Boone Hotel, June 18 and 19, according to M. L. Fling, secretary-treasurer.

Shipments From Southern California

LOS ANGELES, May 7.—Shipments of bulk petroleum from southern California ports to Foreign and Atlantic Seaboard ports totaled 931,722 barrels for week ended May 3 as compared with a total of 929,312 barrels a week ago. This latter figure is supplemented by several shipments omitted from the previous report, as shown below. Destination and quantity of shipments for the past week were as follows:

Destination	Crude	Gasoline	Diesel	Fuel	Total
Pacific For.	66,246	.....	37,177	302,748	406,171
Atlantic Dom.	.....	315,890	.....	52,803	468,693
Atlantic For.	.....	156,858	.....	.....	156,848
Pacific For. (week ended April 25)	.....	.....	103,668	333,306	436,974

Prices 10 Years Ago
May 9, 1921

	Oklahoma	Penna.
58-60 U. S. Motor	14.00-14.50	20.00-20.50
80-84 Natural	8.00-8.75	.....
Kerosine (41-43 Okla.; 47 w. w. Pa.)	3.00-3.25	7.75-8.25
Fuel Oil (24-26 Okla.; 36-40 Pa.)	$0.55-$0.60	4.50-4.75
Crude (Okla. 35-35.9)	$1.50	$3.50
Chicago tank wagon (no state tax)		20.00c

Prices A Year Ago
May 12, 1930

	Oklahoma	Penna.
58-60 U. S. Motor	7.2083	8.25-8.75
Grade A Natural	6.50	.....
Kerosine (Okla. 41-43; Pa. 47 w. w.)	4.25	6.125-6.375
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.75-$0.80	4.00-4.375
Crude (Okla. 35-35.9)	$1.255	$2.75
Chicago tank wagon (including 3c tax)		18.00c

Mid-Continent Refinery Markets

All Refined Oils Quoted Slightly Lower

Staff Special
TULSA, May 9

THE Mid-Continent refinery market failed to develop any features of an optimistic nature during the week of May 4 to 9. Prices for virtually all the major refined products drifted to slightly lower levels. Natural gasolines also experienced slight recessions in prices.

A majority of refiners in Oklahoma and Kansas reported gasoline demand as far as contracts were concerned was exceptionally good. Many of them expressed the opinion shipments would be ahead of production for the current week.

Spot buying was exceptionally light, and there was considerable scramble among some of the refiners for that business. The refiners who are in a position to hold their gasoline in storage made little effort to obtain the business by meeting the prices which would get the orders. As one sales manager said, "there is no need of hunting for more business on which to loose more money."

There were a few refiners, however, who of necessity must keep their production moving day by day, and these refiners were responsible in some measure for the downward trend in prices.

In Texas the gasoline situation showed signs of improving, particularly with reference to the north Texas area. Three refineries were reported to have shut down since May 1 and one or two others were reported to be contemplating that move. That means just that much less gasoline which had to find a home somewhere.

In Louisiana and Arkansas the gasoline market was reported to be in comparatively good shape, but refiners continued to watch the East Texas refining situation with considerable concern. The refiners in East Texas may attempt to push more of their gasoline into the southeast in competition with the Arkansas and Louisiana refiners due to favorable freight rates. This situation has not developed sufficiently as yet, however, to cause any price disturbances.

Jobbers continued to scour the market for naphthas, according to reports from several refiners. They also inquired more frequently for the lower gravity gasolines, in order to offer a gasoline to compete with the "blue" gasoline.

The higher gravity gasolines accordingly suffered somewhat. Prices moved downward and narrowed the differential between them and U. S. Motor.

Natural gasolines also drifted to slightly lower levels. Buying was spasmodic throughout the week. A few 15 and 25-car orders were placed but on the whole buying showed virtually no improvement over the previous week.

Grade AA was pegged at 1.50 cents May 9 while the other grades were held at 1.375 cents a gallon. Demand from jobbers was not sufficient to help the market to any extent and refiners appeared reluctant to swing to a freer use of the material at present. Manufacturers reported their regular accounts continued to take out their full quotas.

Kerosine demand was light. Several refiners said they did not contemplate any increase in demand this summer from the farming belt. They were of the opinion farmers would use the blue gasoline in preference to kerosine.

Distillates have faded from the picture. Prices were slightly lower before the end of the week due to the fact that one or two refiners attempted to clear out their stocks.

Gas oil prices continued to move downward with competition keen for what spot business existed. Reports received here indicated some exceptionally low priced contracts had been made in East Texas for the ordinary grade of gas oil. With summer near buyers were not as anxious to obtain a low cold test oil and this higher cold test oil from the new field undermined the market.

High gravity fuel oils also lost some ground with demand reported light. The lower gravity fuels managed to hold their own in comparatively good shape. Stocks continued to increase slowly.

Bright stock prices dropped 0.5 to 1 cent a gallon for all grades. There was little differential at present between the low and the high cold test grades. The makers of the low cold test oils apparently were willing to meet competition from those making the higher cold test oils. Prices for 150-160 D. bright stock ranged from 13.50 to 15 cents.

Revisions downward in neutral oils prices also were reported by several manufacturers. The reductions ranged from 0.50 to 1.50 cents depending on the grade of oil. Demand was light.

Wax prices were 1.875 to 2 cents, representing a decline of 0.25 cent on the high side of the range. Demand was reported light.

Returns From Africa

TULSA.—W. C. Mundt, construction engineer for The Texas Co., export department, and Mrs. Mundt returned May 4 to Tulsa from Lagos, Nigeria, West Africa. Mr. Mundt spent the past year in the construction of case oil terminals in West Africa, one at Takoradi, Gold Coast, and one at Lagos.

Propose Gasoline Tax To Build Hospital

NEW YORK, May 11.—A tuberculosis sanitarium and aid for state finances are being sought through proposed increases in the gasoline tax rates in Alabama and Tennessee respectively. Michigan also is still seeking an increase, according to the American Petroleum Institute.

Ten states already have increased taxes this year.

Referendums are being sought in Maine, Massachusetts and North Dakota, which recently increased their taxes, to give voters an opportunity to express their wishes on a higher gasoline tax rate.

In Maine, voters at an earlier referendum returned a three-to-one defeat for raising the 4 cent tax to 5 cents, but the increase was passed by the legislature and signed by the governor.

Voters of North Dakota also defeated a higher tax proposal but the legislature increased it. In Massachusetts it may be necessary to take the tax matter to court since the state's attorney general has denied repeated applications for the referendum.

In Alabama, where five counties and 108 cities levy gasoline taxes in addition to the 4 cent state tax, the Alabama Oil Men's Association is active in opposing the rate increase to 6 cents. Three of its counties impose a 3-cent tax, and two levy 2 cents per gallon, while the city taxes are 1 and 2 cents per gallon. The State Board of Health seeks an additional gasoline tax to finance the construction of a tuberculosis sanitarium.

The oil men's association, in a letter to Governor Miller, pointed out that less automobiles were registered in 1930 in sections where there has been increased taxation while registrations increased in sections where no tax increases have been made. The Good Roads Association of Alabama also pointed out that motor vehicle registration had declined 70,000 in two years.

The proposed boost in Tennessee's tax would be to 6 cents, from 5 cents, and in Michigan, to 4 cents, from 3 cents.

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect May 11

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	3.00 –3.50	3.00 –3.50	
Kansas	3.25–3.375		S. O. Neb. & Indiana Territories, etc.
Kansas		3.50 –3.75	Kansas only.
North Texas	2.875–3.125	2.875–3.125	
West Texas	2.875–3.125	2.875–3.125	
Louisiana-Arkansas	3.25 –3.50		Michigan, Ohio and Indiana.
Louisiana-Arkansas		3.75	State or differential haul.
Indiana-Illinois	3.00 –3.375	*	S. O. Indiana territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from Indiana and Illinois refineries, according to conditions and freight rates; no prices F. O. B. point of origin can be given.

Chicago Tank Car Market

CHICAGO, May 9

THE general market situation was unchanged in Chicago. Gasoline demand remained fairly active in the open market and good against contracts. Tank car prices were off approximately 0.25-cent by the end of the week, although traders mostly were of the opinion that the downward movement was about halted. Spot sales of U. S. Motor were mostly at 2.875 to 3.375 cents, although sellers generally asked at least 3 cents for full specification U. S. Motor. Kerosine remained steady. Distillate, gas and fuel oils were sluggish and were offered at lower prices.

Following prices represent majority of sales made on Group 3 freight basis, although shipments may originate in other refining districts, such as North and West Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc.

	Prices May 11	**Prices May 4**	**Prices April 27**
50-52, 437 e.p. naphtha	3.00 – 3.125	3.00 – 3.125	
58-60 U. S. Motor, 437 e.p.	2.875– 3.375	3.00 – 3.375	3.25 – 3.625
†56-62 400-437 e.p. anti-knock gasoline	3.375– 4.25	3.50 – 4.50	3.75 – 4.875
60-62 437 e.p. gasoline	3.00 – 3.375	3.125– 3.50	3.25 – 3.75
60-62 400 e.p. gasoline	3.125– 3.50	3.25 – 3.50	3.375– 3.875
64-66 375 e.p. gasoline	3.50 – 3.75	3.625– 4.00	4.00 – 4.25
68-70 350-360 e.p. gasoline	3.875– 4.25	4.125– 4.375	4.25 – 4.50
*Domestic Aviation Gasoline	5.25 – 5.75	5.25 – 5.75	5.25 – 6.125
41-43 w.w. kerosine	2.375– 2.75	2.50 – 2.75	2.625– 2.75
42-44 w.w. kerosine	2.625– 2.875	2.625– 2.875	2.75 – 3.00
38-40 p. w. distillate	1.875– 2.125	2.00 – 2.25	2.125– 2.375
38-40 straw distillate	1.75 – 2.00	2.00 – 2.25	2.125– 2.25
32-36 ordinary dark gas oil	1.00 – 1.25	1.125– 1.25	1.125– 1.375
32-36 dark zero gas oil	1.50 – 1.75	1.625– 1.875	1.75 – 2.00
32-36 straw zero gas oil	1.625– 1.875	1.75 – 2.00	2.00 – 2.25
28-30 zero fuel oil (per bbl.)	$0.65 –$0.70	$0.675–$0.725	$0.725–$0.75
28-30 fuel oil (per bbl.)	$0.65 –$0.675	$0.65 –$0.70	$0.70 –$0.75
24-26 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.475–$0.55
18-22 fuel oil, low sulfur (per bbl.)	$0.35 –$0.40	$0.375–$0.425	$0.375–$0.45
18-22 fuel oil, high sulfur zero (per bbl.)	$0.35 –$0.40	$0.375–$0.425	$0.425–$0.45
14-16 fuel oil (per bbl.)	$0.325–$0.35	$0.325–$0.35	$0.35 –$0.40

*Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

†Over 45% benzol equivalent. Prices represent quotations and sales.

Shand and Jurs Sales Co., 1080 Broadway, Denver, has developed a distributor selector to its hydraulic internal valve system for truck tanks. This device permits the selection for dumping of any one, all, or any combination of compartments of the tank, heretofore impossible with the hydraulic system.

Improvements have been made in the company's ignition control system which cuts the motor out automatically when the safety valves are open and does not permit starting of the motor until the safety valves have been closed.

The company also announces the appointment of H. A. Paine Co., Inc., Houston, as its representative for conservation equipment and refinery products in the southwest.

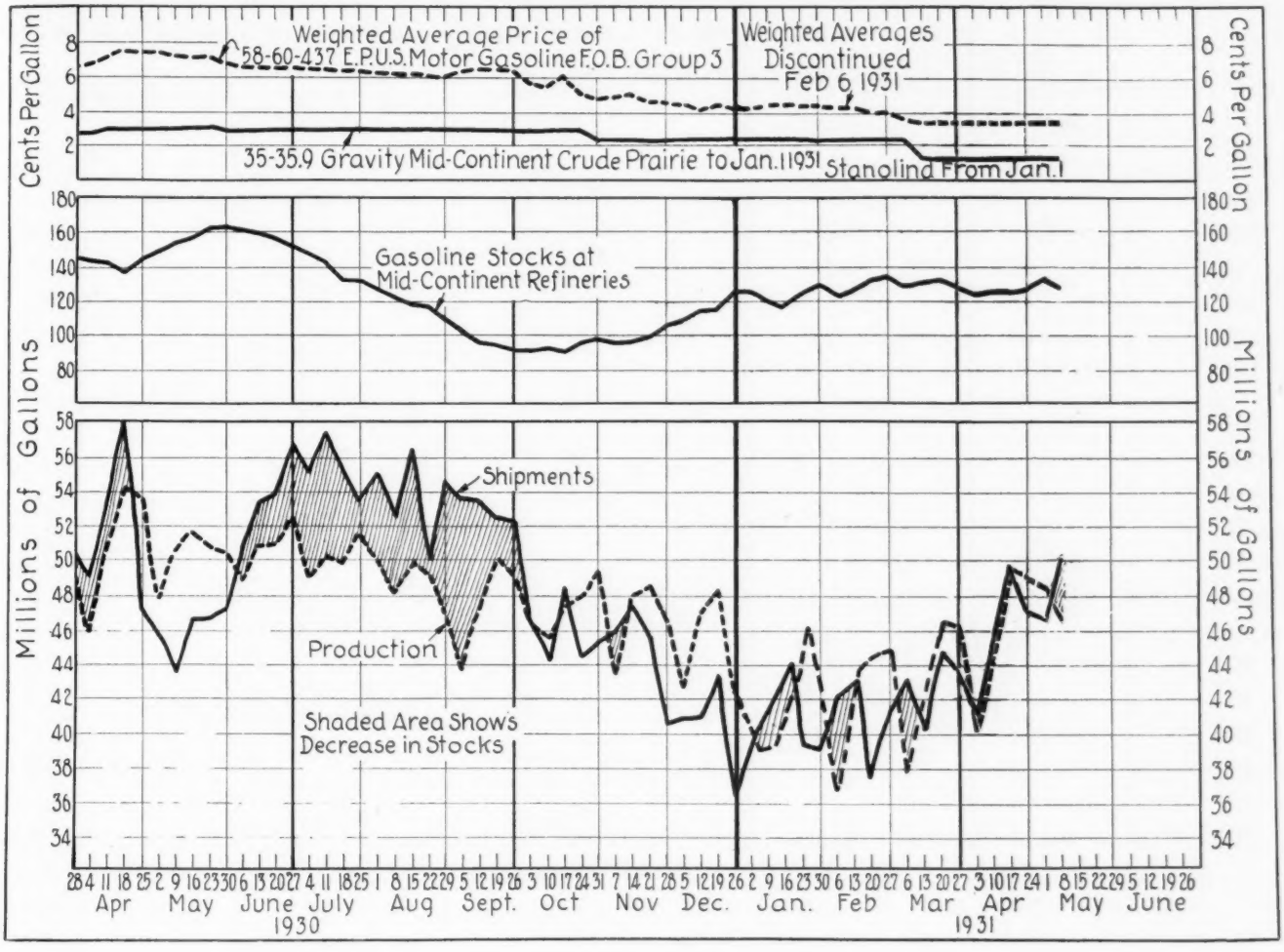
Recently the company expanded its manufacturing facilities by building an addition to its Berkeley, Cal. plant.

Heads Chicago Division

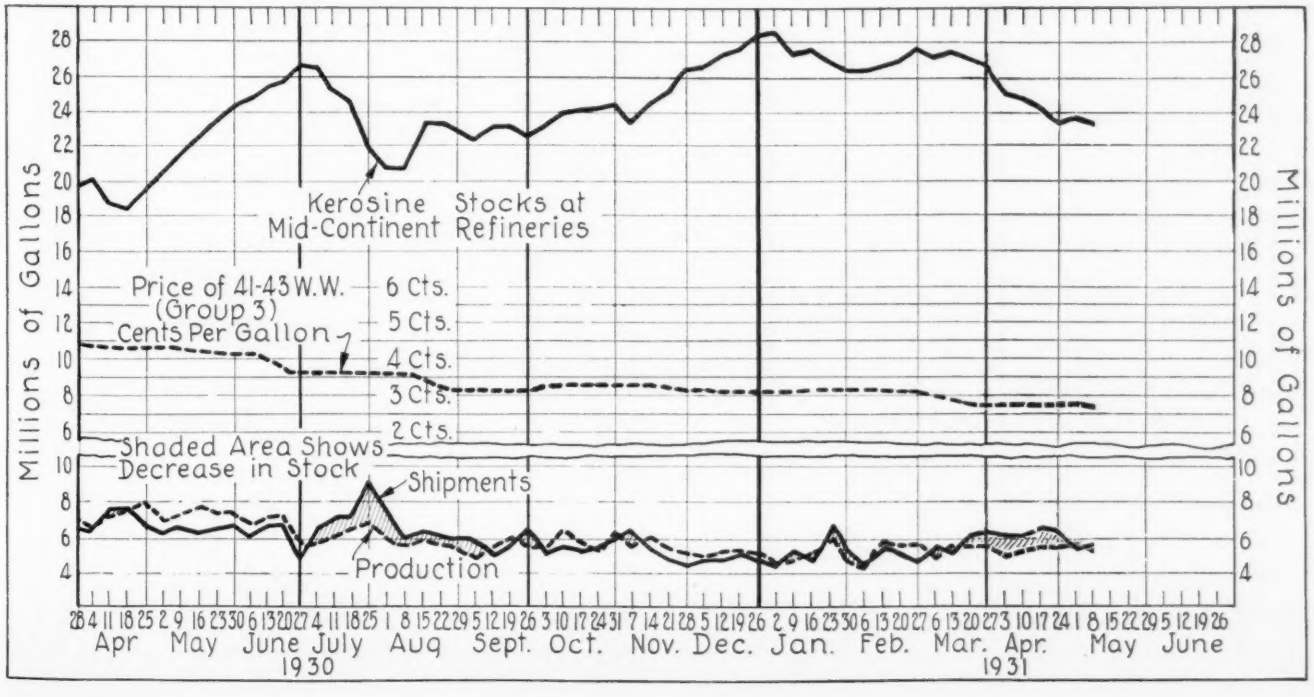
CHICAGO, May 8.—S. J. Richmond has been made sales manager of its Chicago division by the White Oak Corp., Tulsa. Mr. Richmond formerly was manager of White Oak's western division with headquarters at Los Angeles. He was in the employ of the Associated Oil Co. a number of years before joining White Oak.

Barometer of Mid-Continent Refinery Market—Week Ending May 8

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Weighted Average Price of 58-60-437 E.P.U.S. Motor Gasoline F.O.B. Group 3
Weighted Averages Discontinued Feb 6 1931
35-35.9 Gravity Mid-Continent Crude Prairie to Jan. 1 1931
Stanolind From Jan. 1
Gasoline Stocks at Mid-Continent Refineries
Millions of Gallons
Shipments
Production
Shaded Area Shows Decrease in Stocks
Apr May June July Aug Sept. Oct Nov Dec. Jan. Feb Mar Apr May June
1930
1931

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 98



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices May 11	Prices May 4	Prices April 27
48-50 450 e.p. naphtha...	2.75 – 2.875	3.00	3.125– 3.25
50-52 450 e.p. naphtha...	2.75 – 2.875	3.00	3.125– 3.25
56-58 450 e.p. gasoline...	2.75 – 2.875	3.00	3.125– 3.25
58-60 450 e.p. gasoline...	2.75 – 2.875	3.00	3.125– 3.25
58-60 U.S. Motor 437 e.p.	3.00 – 3.50	3.125– 3.50	3.25 – 3.75
60-62 437 e.p. gasoline...	3.00 – 3.50	3.25 – 3.50	3.375– 3.875
60-62 400 e.p. gasoline...	3.125– 3.625	3.375– 3.875	3.50 – 4.00
64-66 390 e.p. gasoline...	3.50 – 3.75	3.75 – 4.00	3.875– 4.125
64-66 375 e.p. gasoline...	3.75 – 4.00	4.00 – 4.25	4.00 – 4.375
68-70 350-360 e.p. gasoline	4.00 – 4.25	4.25 – 4.375	4.25 – 4.50
‡Domestic Aviation Gasoline.....	5.25 – 5.75	5.25 – 6.00	5.25 – 6.00

‡Prices based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% rec. at 221°; 90% at 311°; 96% at 347°; end point, 374°F. Fighting grade in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

52-54 Naphtha.....	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
54-56 Naphtha.....	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
58-60 U.S. Motor 437 e.p.	5.00 – 5.25	5.00 – 5.25	5.00 – 5.50
60-62 400-410 e.p. gasoline	5.125– 5.50	5.25 – 5.50	5.25 – 5.625
64-66 390 e.p. gasoline...	5.50 – 5.75	5.50 – 5.75	5.50 – 6.00
68-70 350-360 e.p.....	6.125– 6.50	6.125– 6.50	6.25 – 6.75

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline			
Ohio, delivery at any point.....	8.00	8.00	8.00

KANSAS (F. o. b. refinery Kansas destination)

58-60 U.S. Motor 437 e.p.	3.50 – 3.75	3.50 – 3.75	3.75 – 4.00
60-62 437 e.p. gasoline...	3.50 – 3.75	3.75 – 4.00	4.00 – 4.25
60-62 400 e.p. gasoline...	3.625– 3.875	4.00 – 4.25	4.125– 4.37
64-66 375 e.p. gasoline...	4.00 – 4.50	4.375– 4.625	4.625– 4.87

NORTH TEXAS (F. o. b. North Texas refineries)

56-58 450 e.p. gasoline...	2.625	3.00	3.00 – 3.25
58-60 450 e.p. gasoline...	2.625	3.00	3.00 – 3.25
58-60 U.S. Motor 437 e.p.	2.875– 3.125	3.125– 3.375	3.25 – 3.50
60-62 400 e.p. gasoline...	3.00 – 3.25	3.375– 3.75	3.50 – 4.00
64-66 390 e.p. gasoline...	3.375– 3.625	3.75	4.00 – 4.25
64-66 375 e.p. gasoline...	3.75	4.00 – 4.125	4.125– 4.375
68-70 350-360 e.p. gasoline	4.00	4.25	4.375– 4.625

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

50-52 naphtha.....	2.50	2.50	3.00 – 3.25
58-60 437 e.p. gasoline...	2.625	2.75	3.125– 3.375
58-60 U.S. Motor 437 e.p.	2.875– 3.125	3.00 – 3.25	3.25 – 3.50

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

58-60 U.S. Motor 437 e.p.	3.75	3.75	3.75

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	3.75	3.75	3.75

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	3.00 – 3.50	3.00 – 3.75	3.00 – 4.00
54-58 U.S. Motor, for outside state shipment....	3.125– 3.50	3.25 – 3.75	3.00 – 4.00
58-61 375-400 e.p. gasoline	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00
42-45 Engine Distillate 445-480 e.p.....	3.00 – 3.50	3.00 – 3.50	3.00 – 4.00

NATURAL GASOLINE

(Note: End point of all grades, not over 375F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA (F. o. b. Oklahoma refineries)

Grade AA, 80-87.9, 90% Recovery.....	1.50	1.50 – 1.75	1.50 – 1.625
Grade A, 72-79.9, 90% Recovery.....	1.75	1.625– 1.75	1.625– 1.75
Grade BB, 84-92, 85% Recovery.....	1.375	1.50	1.50 – 1.625
Grade B, 76-83.9, 85% Recovery.....	1.375	1.50	1.50 – 1.625
Grade C, 80-92, 78% Recovery.....	1.375	1.50	1.50 – 1.625

NORTH TEXAS (F. o. b. Breckenridge)

	Prices May 11	Prices May 4	Prices April 27
Grade AA, 80-87.9, 90% Recovery.....	1.50	1.50 – 1.75	1.50 – 1.625
Grade A, 72-79.9, 90% Recovery.....	1.75	1.625– 1.75	1.625– 1.75
Grade BB, 84-92, 85% Recovery.....	1.375	1.50	1.50 – 1.625
Grade B, 76-83.9, 85% Recovery.....	1.375	1.50	1.50 – 1.625
Grade C, 80-92, 78% Recovery.....	1.375	1.50	1.50 – 1.625

NORTH LOUISIANA (F. o. b. Monroe District)

Grade AA.....	†1.75	†1.75	†1.75
Grade BB.....	†1.625	†1.625	†1.75
Grade C.....	†1.625	†1.625	†1.75

CALIFORNIA (F. o. b. California refineries)

75-85, 375-390 e.p. for blending.....	2.75 – 3.25	2.75 – 3.25	3.00 – 3.50

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

45 w.w. kerosine.....	4.25 – 4.375	4.25 – 4.50	4.25 – 4.50
46 w.w. kerosine.....	4.375– 4.625	4.50 – 4.75	4.50 – 4.75
47 w.w. kerosine.....	4.50 – 4.75	4.50 – 5.00	4.75 – 5.00

OKLAHOMA (F. o. b. Oklahoma refineries)

41-43 w.w. kerosine.....	2.50 – 2.75	2.50 – 2.75	2.625– 2.75
42-44 w.w. kerosine.....	2.625– 2.875	2.625– 2.875	2.875– 3.125

KANSAS (F. o. b. refinery Kansas destination)

41-43 w.w. kerosine.....	2.875– 3.125	3.00 – 3.25	3.00 – 3.25
42-44 w.w. kerosine.....	3.00 – 3.25	3.125– 3.375	3.25 – 3.50

NORTH TEXAS (F. o. b. North Texas refineries)

40-42 w.w. kerosine.....	2.375	2.375	2.50
41-43 w.w. kerosine.....	2.50 – 2.625	2.50 – 2.625	2.625– 2.75

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosine.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50

ARKANSAS (Ark., N. La. and Miss. destination)

41-43 w.w. kerosine.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50

CALIFORNIA (F. o. b. California refineries)

38-40 w.w. kerosine.....	4.00 – 5.00	4.00 – 4.50	4.00 – 4.50

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.	(Viscosity at 70° F.)		
200 No. 3 color, 420-425 flash.....	21.50 –22.00	21.50 –22.00	21.50 –22.50
180 No. 3 color, 410-415 flash.....	18.50 –19.00	18.50 –19.00	18.50 –19.50
150 No. 3 color, 400-405 flash.....	16.00 –17.00	16.50 –17.00	16.50 –17.50

****MID-CONTINENT** (F. o. b. Mid-Continent refineries)

Vis. Color	(Viscosity at 100° F.)		
100—No. 2.....	5.25	5.25	5.25
150—No. 3.....	6.25 – 6.75	6.75 – 7.00	6.75 – 7.00
150—No. 4.....	6.50	6.50	6.50
180—No. 3.....	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180—No. 4.....	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
180—No. 5.....	7.50	7.50	7.50
200—No. 3.....	8.75 – 9.50	9.50	9.50
200—No. 4.....	8.50	8.50	8.50
200—No. 5.....	8.25	8.25	8.25
220—No. 3.....	10.00	10.00 –10.50	10.00 –10.50
220—No. 4.....	9.50	9.75 –10.25	9.75 –10.25
220—No. 5.....	9.00	10.00 –10.25	10.00 –10.25
240—No. 3.....	11.00	12.00	12.00
240—No. 4.....	10.00	10.50	10.50
240—No. 5.....	9.50	10.50 –11.00	10.50 –11.00
280—No. 3.....	12.50	14.00	14.00
280—No. 4.....	11.50	13.00	13.00
280—No. 5.....	11.00	12.00	12.00

Note: Quotations for 0 to 10 cold test neutral oils are 1 to 2 cents higher depending on the grade.

****Prices represent Quotations and Sales.**

†Prices nominal ††Only one refiner quoting *Quotations only

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL (F. o. b. Gulf Coastal refineries)

Vis. Color	Prices May 11 (Viscosity at 100° F., pour test 0)	Prices May 4	Prices April 27
100—No. 2 Pale	5.00 – 5.75	5.50 – 6.25	5.50 – 6.25
200—No. 3 Pale	7.50 – 8.00	8.00 – 8.50	8.00 – 8.50
300—No. 3 Pale	8.50 – 9.00	9.00 – 9.50	9.00 – 9.50
500—No. 3½ Pale	9.50 –10.00	10.00 –10.50	10.00 –10.50
750—No. 4 Pale	11.00 –11.50	11.50 –12.50	11.50 –12.50
1200—No. 4 Pale	14.50 –15.00	14.50 –15.00	14.50 –15.00
2000—No. 4-5 Pale	15.00 –15.50	15.50 –16.00	15.50 –16.00
200—No. 5½ Red Oil	6.50 – 7.00	7.00 – 7.50	7.00 – 7.50
300—No. 5½ Red Oil	7.50 – 8.00	8.00 – 8.50	8.00 – 8.50
500—No. 6 Red Oil	8.50 – 9.00	9.00 –10.00	9.00 –10.00
750—No. 6 Red Oil	10.50 –11.00	11.00 –11.50	11.00 –11.50
1200—No. 5-6 Red Oil	13.50 –14.00	13.50 –14.00	13.50 –14.00
2000—No. 6 Plus Red Oil	14.50 –15.00	15.50 –16.00	15.50 –16.00

‡CALIFORNIA (F. o. b. California refineries)

Vis. Color	(Viscosity at 100° F.)		
100—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200—No. 3	11.50	11.50	11.50
300—No. 3	13.00	13.00	13.00
450—No. 3	15.50	15.50	15.50
550—No. 3	16.50	16.50	16.50
600—No. 3	17.00	17.00	17.00
200—No. 5	11.00	11.00	11.00
300—No. 5	12.00	12.00	12.00
400—No. 5	14.00	14.00	14.00
500—No. 5	15.00	15.00	15.00
600—No. 5	16.00	16.00	16.00
700—No. 7	18.00	18.00	18.00

‡Neutral oils not manufactured commercially in California.

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)

(Cylinder stock prices represent quotations and sales to domestic jobbers only).

190-200 Vis. D at 210° Brt. St.	18.00	20.00	20.00
150-160 Vis. D at 210° Brt. St., 0-10 cold test	13.50 –15.00	14.50 –16.00	14.50 –16.00
150-160 Vis. D at 210° Brt. St., 10-25 cold test	13.50 –14.50	14.50 –15.00	14.50 –15.00
150-160 Vis. D Brt. Stock, 25-40 cold test	13.50 –14.00	14.00 –14.50	14.00 –14.50
150-160 Vis. E 210° Brt. St.	13.00 –14.00	13.50 –14.50	13.50 –14.50
600 St. Ref. Olive Green	6.00 – 7.50	6.00 – 8.00	6.00 – 8.00
600 St. Ref. Dark Green	4.50 – 5.50	4.50 – 5.50	4.50 – 5.50
Black Oil	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00

PENNSYLVANIA (F. o. b. Western Penna. refineries) (A.S.T.M. Tests)

600 Steam Refined, filterable	7.75 – 8.25	8.00 – 8.50	8.00 – 8.75
650 Steam Refined	10.75 –11.25	11.25 –12.00	11.50 –12.00
600 Flash	11.75 –12.50	12.00 –13.00	12.50 –13.00
630 Flash	17.00 –18.00	17.00 –18.00	18.00 –20.00
600 Warren E	11.75 –12.25	11.75 –12.25	11.75 –12.50
Cold Test Stocks, 140-150 vis. at 210°, 540-550 flash, No. 8 color, 20 pour test and below	17.50 –18.00	17.50 –18.00	17.50 –18.00
No. 8 color, 25 and 35 pour test	17.00 –17.50	17.25 –17.50	17.50 –18.00
No. 8 color, 40 pour test and above	17.00 –17.50	17.25 –17.50	17.50 –18.00

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

122-124 white crude scale a.m.p.	2.125	2.125	2.125– 2.25
124-126 white crude scale, a.m.p.	2.125	2.125	2.125– 2.25

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)

124-126 White Crude Scale, a.m.p.	1.875– 2.00	1.875– 2.25	2.00 – 2.25

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	2.75 – 2.875	2.625– 2.875	2.625– 2.875
30-34 fuel oil	2.75 – 2.875	2.625– 2.875	2.625– 2.875
28-32 fuel oil	2.75 – 2.875	2.625– 2.875	2.625– 2.875

†Prices nominal ††Only one refiner quoting *Quotations only

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices May 11	Prices May 4	Prices April 27
38-40 straw distillate	1.75 – 2.125	2.00 – 2.375	2.125– 2.375
36-38 straw distillate	1.625– 1.875	2.00	2.00 – 2.125
32-36 straw gas oil	1.375– 1.50	1.625– 1.75	1.75 – 2.00
32-36 straw gas oil zero	1.625– 1.875	1.875– 2.00	2.00 – 2.125
32-36 dark gas oil	1.00 – 1.375	1.25 – 1.50	1.25 – 1.50
32-36 dark gas oil zero	1.625– 1.75	1.75	1.75 – 2.00
28-30 zero fuel oil (per bbl.)	$0.675–$0.70	$0.70 –$0.775	$0.725–$0.775
28-30 fuel oil (per bbl.)	$0.625–$0.675	$0.675–$0.75	$0.70 –$0.75
26-28 fuel oil (per bbl.)	$0.575–$0.625	$0.575–$0.675	$0.60 –$0.70
24-26 fuel oil (per bbl.)	$0.475–$0.525	$0.475–$0.525	$0.475–$0.525
22-26 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.45 –$0.50
18-22 fuel oil (per bbl.)	$0.375–$0.425	$0.375–$0.425	$0.40 –$0.45
16-20 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40
14-16 fuel oil (per bbl.)	$0.35 –$0.375	$0.35 –$0.375	$0.35 –$0.40

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw distillate	2.25 – 2.50	2.625– 2.75	2.625– 2.75
36-38 straw distillate	2.125– 2.25	2.50	2.50
32-36 straw gas oil	2.00 – 2.25	2.25 – 2.50	2.25 – 2.50
18-22 fuel oil (per bbl.)	$0.475–$0.575	$0.475–$0.575	$0.50 –$0.60
10-14 fuel oil (per bbl.)	$0.40 –$0.45	$0.40 –$0.45	$0.40 –$0.45

NORTH TEXAS (F. o. b. North Texas refineries)

38-40 straw distillate	1.75 – 2.00	2.00 – 2.25	2.125– 2.375
38-40 p.w.treated distillate	2.00 – 2.25	2.00 – 2.375	2.125– 2.50
32-36 gas oil, cracked	1.375– 1.625	1.50 – 1.75	1.50 – 1.75
32-36 St. reduced gas oil	1.00 – 1.375	1.25 – 1.50	1.25 – 1.50
24-26 fuel oil (per bbl.)	$0.375–$0.425	$0.375–$0.425	$0.375–$0.425
20-24 fuel oil (per bbl.)	$0.325–$0.375	$0.325–$0.375	$0.35 –$0.40
18-22 fuel oil (per bbl.)	$0.30 –$0.35	$0.30 –$0.35	$0.325–$0.35

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment.

34-38 gas oil	1.625– 1.75	1.625– 1.75	1.625– 1.75
30-32 gas oil	1.00 – 1.25	1.00 – 1.25	1.00 – 1.25
28-30 zero gas oil	1.50 – 1.75	1.50 – 1.75	1.50 – 1.75
18-22 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.25 – 2.50	2.25 – 2.50	2.25 – 2.375
32-36 gas oil, straw	2.25 – 2.50	2.25 – 2.50	2.25 – 2.375
14-16 fuel oil (per bbl.)	$0.55 –$0.65	$0.55 –$0.65	$0.55 –$0.65

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil, straw	2.25 – 2.375	2.125– 2.375	2.25 – 2.375
32-36 dark gas oil	2.25 – 2.375	2.125– 2.375	2.25 – 2.375
28-30 gas oil	2.125– 2.25	2.125– 2.25	2.125– 2.25
20-24 fuel oil (per bbl.)	$0.75	$0.75	$0.75
9-12 fuel oil (per bbl.)	$0.525–$0.575	$0.525–$0.575	$0.525–$0.575
Black oil	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25

CALIFORNIA (F. o. b. San Joaquin Valley. Nominal pipe line charge to San Francisco 24c per bbl. more and to San Pedro 20c per bbl. more.)

14-18 fuel oil (per bbl.)	$0.40 –$0.50	$0.35 –$0.50	$0.35 –$0.50
14-18 Bunker oil (per bbl.)	$0.55 –$0.80	$0.55 –$0.80	$0.55 –$0.80
30-34 gas oil (per bbl.)	$0.65 –$0.80	$0.65 –$0.80	$0.65 –$0.80
27 Plus Diesel oil (per bbl.)	$0.65 –$0.80	$0.65 –$0.80	$0.65 –$0.75

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. Penna. refinery. In tank cars ⅛c to ¼c per pound less.) Two refiners quoting.

Snow White	6.50 – 7.25	6.50 – 7.25	6.50 – 7.25
Lily White	5.125– 6.00	5.125– 6.00	5.125– 6.00
Cream White	4.125– 5.00	4.125– 5.00	4.125– 5.00
Light Amber	2.625– 3.00	2.625– 3.00	2.625– 3.00
Amber	2.375– 2.75	2.375– 2.75	2.375– 2.75
Red	1.875– 2.50	1.875– 2.50	1.875– 2.50

PETROLEUM COKE

****OKLAHOMA** (F. o. b. Oklahoma refineries)

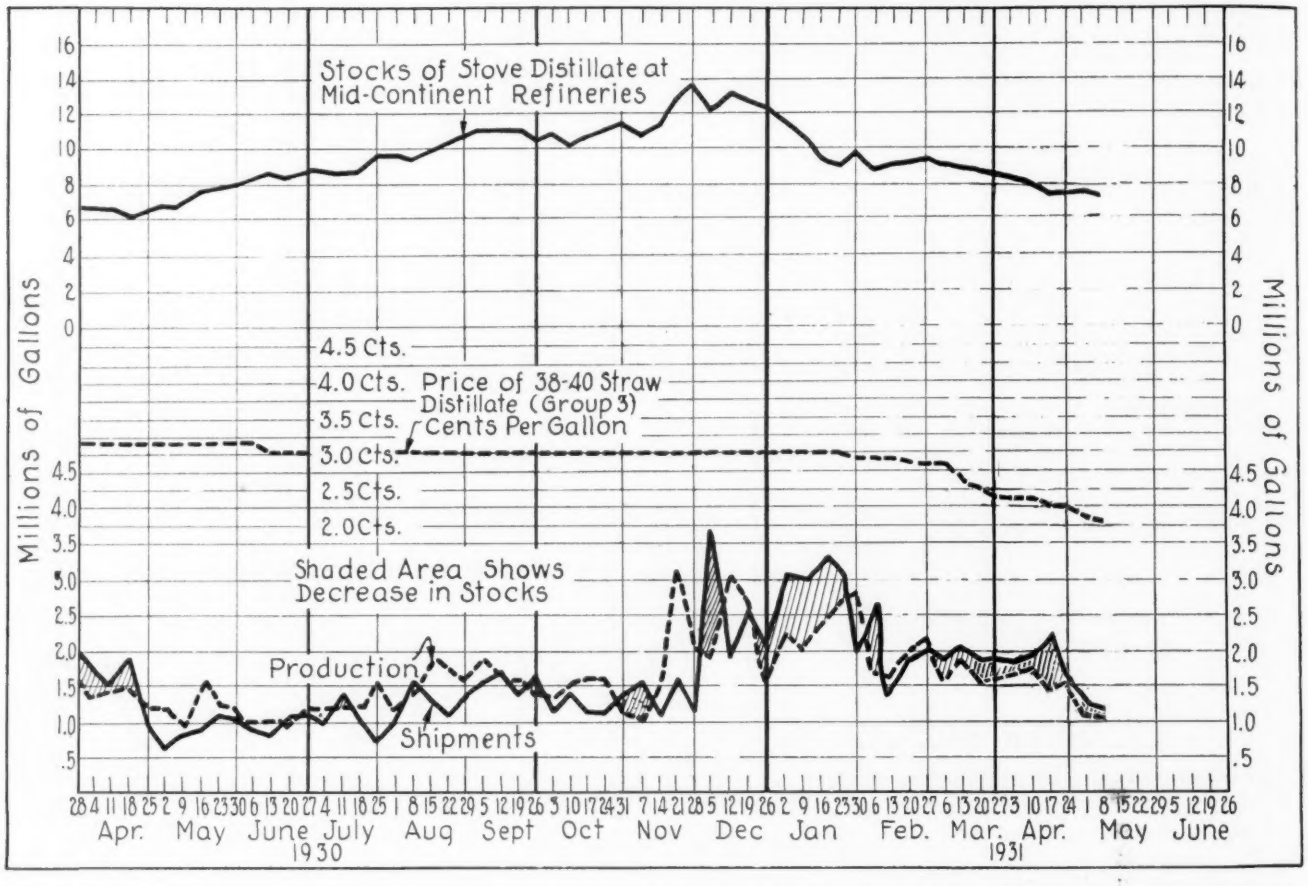
(Per ton in car lots)

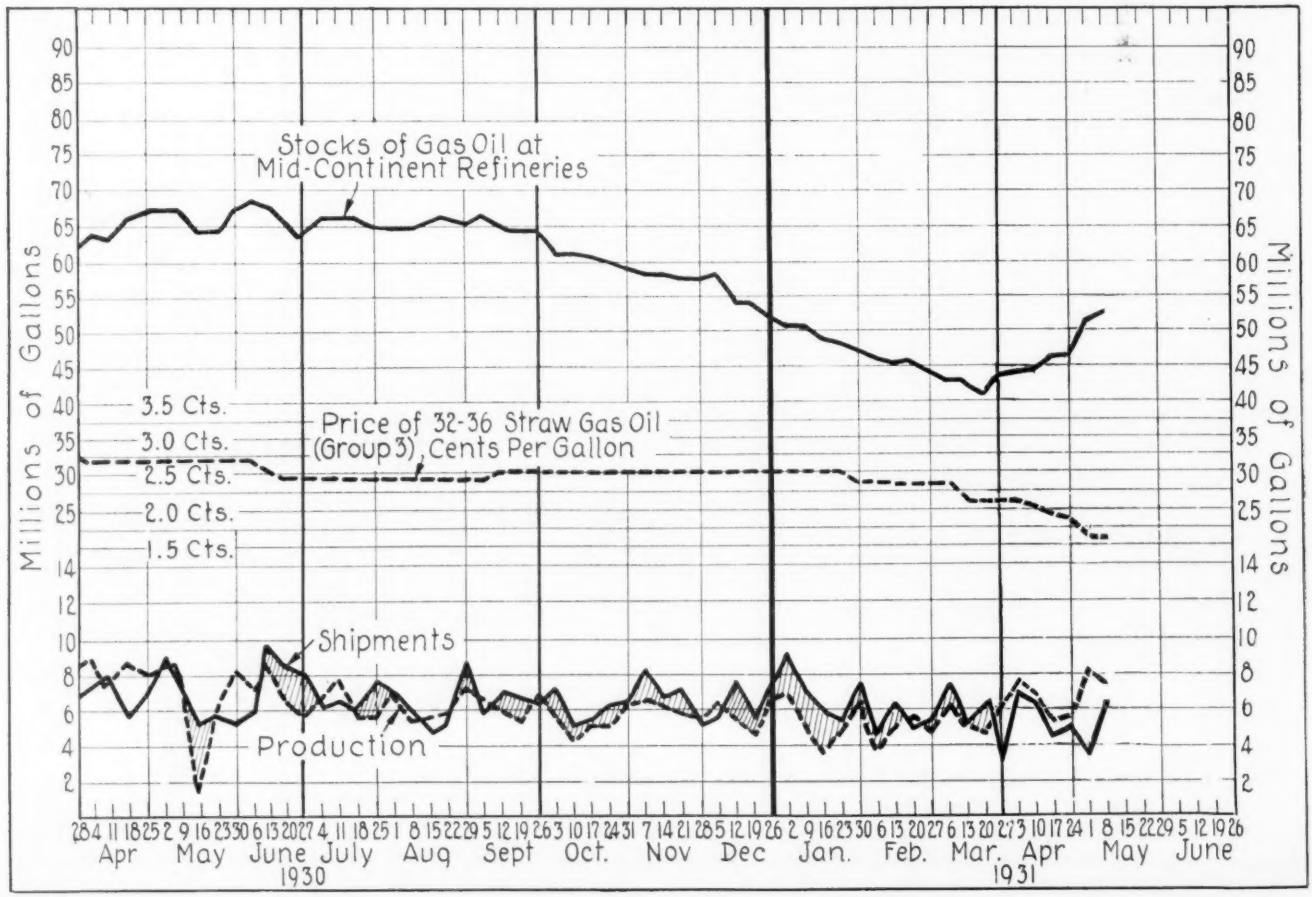
Lump	$4.50 –$5.00	$4.50 –$5.00	$4.50 –$5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

****Prices represent Quotations and Sales**

Barometer of Mid-Continent Refinery Market—Week Ending May 8

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



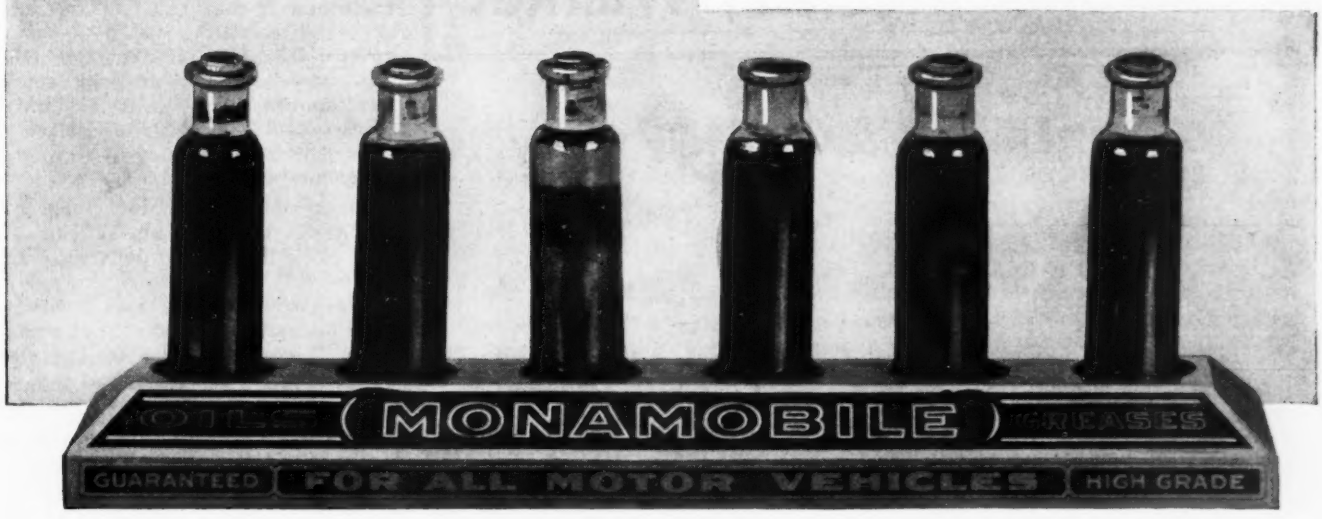


Instantly seen, easily handled

Canco metal displays mean added sales...

TWO qualities that mean much to the sale of packaged petroleum products are the attention value and structural design of Canco decorated metal displays. Customers are instantly attracted by their clear lithography, and tempted to buy. Certain displays can be designed to hold the product—allowing the customer to pick it from the display and judge its merits.

Canco decorated metal displays offer interesting possibilities for increasing the sales of petroleum products. A Canco representative will gladly talk with you on their possibilities for your product.



SHONK WORKS

AMERICAN CAN COMPANY

Lithography on Metal — Store Displays, Signs, Utilities

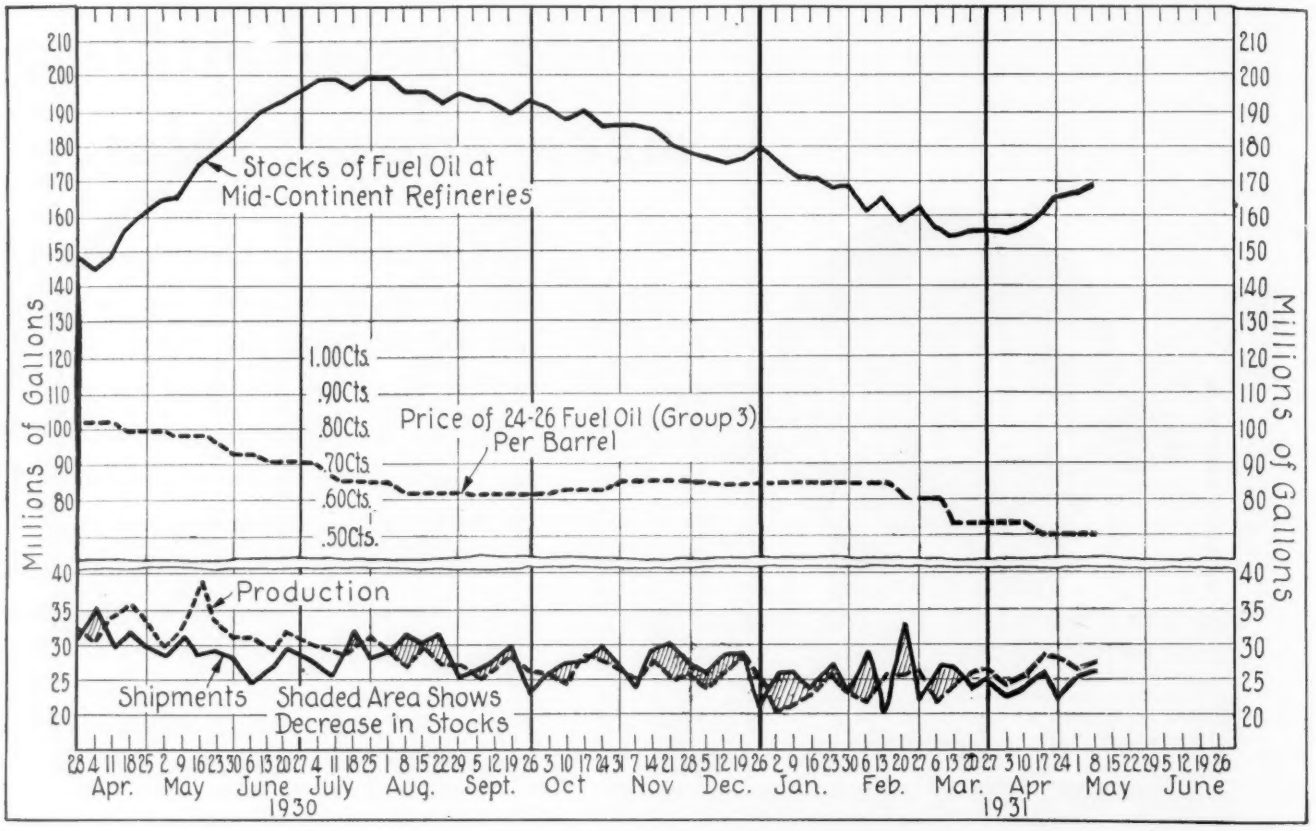
New York
Boston

MAYWOOD, ILLINOIS

Cleveland
Chicago

Barometer of Mid-Continent Refinery Market—Week Ending May 8

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



California Refinery Market

Demand Light; Prices Generally Steady

LOS ANGELES, May 9

CALIFORNIA export and domestic markets had little to offer in the way of active business the past week and quotations for all commodities were practically unchanged.

Local exporters reported a few scattered inquiries in the market, mostly for gasoline and gas oil, but they were not overly optimistic concerning the possibility of immediate spot sales.

Although definite details were withheld, it was learned that a cargo of gasoline, lifted the past week, destination the Atlantic seaboard, was sold several weeks ago at slightly under 4 cents. One report, later discounted, indicated the gasoline was U. S. Motor and the price between 3.50 and 3.625 cents.

Returns from bids for the Pacific coast navy fuel and diesel oil requirements for the coming year, opened May 1, indicated Shell Oil Co. was successful bidder for most of the business.

This company's price was $0.485 per barrel for 3,500,000 barrels of bunker B fuel, f.o.b. the vessel, San Pedro harbor, as compared with the next lowest quotation of $0.539 made by Associated Oil Co. on a lot of 1,000,000 barrels graduated upward to $0.645 for the entire quantity.

For a lot of 250,000 barrels at San Francisco, Shell was again low with $0.545, with Associated and Union following at $0.575 and $0.64, respectively. For barge deliveries at this point, Shell quoted $0.595 for less than 500-barrel lots and $0.57 for lots of 5000 barrels or over.

Union Oil Co. was low bidder for 750,000 barrels of diesel oil at San Pedro with a price of $0.83 and General Petroluem Co. was second with $0.90.

In domestic tank car markets, reports had it that gasoline and crude oil price structures would be revised upward by the middle of the month although the chance of such a move was thought to rest entirely upon the success of the recently organized Oil Producers Sales Agency in signing up independent production.

At the end of the week, spot quotations for gasoline ranged from 3 to 3.50 cents for instate delivery with a low of 3.125 cents when shipped out of the state. Several cars of distress gasoline were reported sold at a shade under 3 cents for use in the state. These prices are exclusive of tax.

TORONTO.—The variability in the productivity of adjacent areas in the Turner Valley, Alta. field, is indicated in the 19 wells drilled by the Imperial Oil, Ltd. in that field, many of which were disappointing in results.

In 1930 the company drilled 56,400 feet of well, as against 90,100 feet in 1929. On Dec. 31, 1930, the Imperial controlled 44 producing wells in that field, 13 of which were drilling. The company produces 65 per cent of the entire output of Alberta, which output in 1930 totaled 1,368,411 barrels.

Pennsylvania Markets

Trade Reports More Optimistic

CLEVELAND, May 11.—More optimism was noted in the reports from western Pennsylvania market traders last week. While prices generally were not encouraging to optimism, the steady increase in demand for a number of commodities was. More than a few traders reported a much better demand for gasoline. Demand for motor oils was even described as brisk, a word which has been noticeably lacking in the oil man's vocabulary for some months past.

Part of the increased demand for gasoline was attributed to the normal spring increase. In some quarters the growth of the third grade of gasoline was felt to have been a boon to Pennsylvania gasoline.

U. S. Motor gasoline still was advailable at 5 cents in all parts of the field as the week ended but there were fewer sellers quoting this price than there were at the beginning of the week. Resale agents reported a stiffening in their buying prices.

Kerosine generally was sluggish and prices eased off slightly in some quarters.

No further improvement was noted in the demand for fuel oil from industrial buyers, but there was a substantial increase in the demand from refiners with crackers. Several large blocks of straw fuel were reported sold at 2.50 to 2.625 cents a gallon and on May 9 there were only limited quantities available at less than 2.75 cents.

While motor oil activity was assuming larger proportions, the demand for unfinished oils was slack, particularly for cylinder stocks and bright stock. Neutral oils remained relatively steady. Several refiners reported they had made large drafts on their bright stock storage in making up motor oils to meet the increased demand for the latter, and there seemed to be very little concern over the diminishing demand for bright stock.

TORONTO.—A by-law which would give the Southern Natural Gas Co., subsidiary of the Dominion Natural Gas Co., a distributing franchise in Yarmouth township, Ont., will be voted upon May 28 by township electors. The company is offering natural gas at 85 cents per 1000 cubic feet for the first 10,000 feet.

TORONTO.—Paul Lajoie, chief chemist of Imperial Oil, Ltd., here, spoke on "The Manufacture and Use of Fuel Oil" before a meeting of the Oil Heating Association of the Montreal Board of Trade recently.

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Eastern Domestic Markets

Prices Lower at Philadelphia and Baltimore

Staff Special
NEW YORK, May 9

GASOLINE prices declined in the more active seaboard markets the past week in sympathy with the lower prices at New York harbor. However, throughout the week ended May 9, the New York trade reported that the Bayonne market was holding steady at the 5.75-cent level.

On May 6 the Standard Oil Co. of New Jersey reduced its tank wagon and service station prices of gasoline 0.5 cent throughout its territory, except Delaware. On May 8 the Standard Oil Co. of New York made a similar reduction at Yonkers and Mt. Vernon.

The New Jersey company reduced the price of diesel oil 10 cents a barrel in its seaboard markets.

The tank car markets for gasoline at New York harbor was quite active at 5.75 cents, according to most sellers. Although purchases were confined to current needs, an increase in gallonage was noted in all quarters. Barge lots were offered at 5.50 cents and little price shading was reported in this market.

The Philadelphia market responded to the competition offered by the New York trade and prices were reduced. Sizeable quantities of U. S. Motor were offered at 5.75 cents. The Baltimore market was down a 0.25 cent in sympathy with the neighboring markets. Sellers in this district reported a good demand for their products.

Most of the gasoline moving into the New England market was under contract. Although the posted prices for spot business remained unchanged in the principal marketing areas, the structure was reported to be none too secure. The retail market was disturbed by the more numerous offerings of gasoline at 10 cents per gallon, including tax.

The subject of burning oils was a favorite topic for conversation throughout the week. The results of the bidding for the Navy business were announced and considerable light was thrown on the fuel market. While these bids were not accurate indices of the general market, yet they supply a guide for the coming season. Tank car demand for the several grades of oil was light. Prices ranged from 4 to 4.50 cents for the 28-34 gravity oil and 5 to 5.50 cents for the 36-40 gravity oil.

Gulf Coast Markets

Gasoline, Kerosine Quoted 0.25 Cent Lower

Staff Special
NEW YORK, May 9

BULK markets at the Gulf experienced another downward revision of prices during the week just ended. All grades of gasoline and kerosine were quoted 0.25 cent lower, and the export trade hopefully watched the foreign market for inquiries. A few "feelers" were reported in the market early in the week, but no actual business was placed.

Continental buyers showed renewed interest in the cargo market, generally speaking, but European suppliers continued to be in a position to offer material at approximately 0.50 cent under American prices.

The new schedule of American prices is as follows: U. S. Motor gasoline, 4.25 cents; 60-62, 400 end point, 4.50 cents; 61-63, 390 end point, 4.75 cents; 64-66, 375 end point, 5 cents. The kerosines were offered at 3.75 cents and 4.75 cents for the 41-43 prime white and 44 water white grades, respectively.

There were no inquiries reported for cased goods or for cargo lots of heavy oils. The prices for these products remained unchanged.

Venezuela Crude

The market for Venezuela crude remained sluggish due to the unsettled condition of crude oil markets in the United States. The price for this material remained unchanged at $0.70 per barrel, f.o.b. deepwater in the Lake Maracaibo region.

Panuco Crude

Panuco crude was not in demand last week. The market for this oil was very quiet and prices remained unchanged at $0.46 per barrel, f.o.b. Tampico.

Gulf Lube Prices Lower

HOUSTON, May 9.—Prices were generally a half cent lower in the Gulf Coastal lubricant market at the week-end. Demand was slow from jobbers and bulk tanker business for coastwise or foreign shipment was lacking. A number of manufacturers were holding quotations to the level of high market ranges, but material of the various grades could be had freely at the lower ranges.

Wax Markets

Foreign Inquiry Active

NEW YORK, May 9.—Foreign buyers were actively inquiring for various grades of wax the past week, but from the standpoint of actual sales markets generally were dull. The general run of inquiries for export shipment specified 200 to 300 tons of refined waxes for delivery over the next three months. Domestic buying was dull. The prices offered by the buyers were said to be too low for serious consideration from sellers.

There were no changes in the prices asked for scale and refined waxes in either the New York or the New Orleans market. Sellers of the refined grades indicated a disposition to shade prices slightly on firm bids for large orders.

Correction

J. R. Atchison, manager of the Oklahoma Petroleum Marketers Association, writes that Oklahoma distributors will be allowed a 3 per cent deduction from gross gasoline gallonage receipts in computing gasoline tax as has been the case in the past. Jobbers also will be allowed to continue deducting 0.5 per cent of the tax collected as compensation for their services to the state in collecting the tax.

The new gasoline tax law in Oklahoma discussed on Pages 95 and 96 of the April 29 issue of NATIONAL PETROLEUM NEWS amends the 1929 law which allowed the 3 per cent shrinkage allowance and the 1923 law which allowed the 0.5 per cent collection compensation, but, as finally passed, does not repeal these two provisions.

Busses Seek Tax Exemption

SPRINGFIELD, Ill.—The Illinois senate today passed a bill to exempt franchised motor busses from paying the state gasoline tax of 3c. The bill was proposed by Senator Arthur Huebsch, Brookfield, Ill., a Chicago suburb. The bill must now pass the House of Representatives before being considered by the governor.

Oil Trademarks For Copyright

THE following are trademark applications pertinent to our field pending in the United States Patent office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Building, Washington, D. C. trademark specialists.

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ATLANTIC WHITE FLASH, and representation of a streak of lightening. Ser. No. 307,964. The Atlantic Refining Co., Philadelphia, Pa. For gasoline.

INFURNOL. Ser. No. 307,186. Wadhams Oil Corp., Milwaukee, Wis. For furnace fuel oil.

SHIFT-LITE, and representation of a feather and gears. Ser. No. 307,187. Wadhams Oil Corp., Milwaukee, Wis. For lubricating grease and lubricating-grease compounds.

LEADLUBE. Ser. No. 309,044. Union Oil Co. of California, Los Angeles, Calif. For lubricating oils and greases.

"PLUMBOLEUM." Ser. No. 309,268. Galena Oil Corporation, Franklin, Pa. For lubricating oils and lubricating greases.

"W, WESTINGHOUSE ELECTRIC," in a circle. Ser. No. 309,952. Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. For lubricating oil.

"CREE." Ser. No. 310,102. Continental Oil Co., Ponca City, Okla. For lubricating oil.

"LUBER-TONE." Ser. No. 304,553. Garland Products Co., St. Louis, Mo. For motor-fuel oil.

"NO-LIN." Ser. No. 308,693. E. F. Houghton & Co., Philadelphia, Pa. For core oils.

"CONOCO," and representation of a triangle, in red. Ser. No. 309,606. Continental Oil Co., Ponca City, Okla. For lubricating oils and greases.

"EBANO." Ser. No. 309,901. Pan American Petroleum & Transport Co., Wilmington, Del. For lubricating oils.

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Complete Seaboard Market

(Export Markets for whole year given in OIL HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations. Prices shown below do not include inspection tax levied in Florida and South Carolina.)

	Prices May 11	Prices May 4	Prices April 27
U. S. MOTOR GASOLINE			
New York harbor	5.75 – 6.00	5.75 – 6.125	6.00 – 6.25
Portland district	7.00	7.00	7.00
Boston district	6.75	6.75	6.75
Providence district	6.75	6.75	6.75
Philadelphia district	5.75 – 6.00	6.00 – 6.25	6.00 – 6.25
Baltimore district	5.75 – 6.00	6.00 – 6.25	6.00 – 6.25
Norfolk district	6.50	6.50	6.50
Charleston district	6.50	6.50	6.50
Savannah district	6.50	6.50	6.50
Jacksonville district	6.50	6.50	6.50
CALIFORNIA U. S. MOTOR GASOLINE			
New York harbor	5.75 – 6.00	6.00 – 6.25	6.00 – 6.25
Philadelphia district	5.75 – 6.00	6.00 – 6.25	6.00 – 6.25
Baltimore district	5.75 – 6.00	6.00 – 6.25	6.00 – 6.25
‡DOMESTIC AVIATION GASOLINE			
New York harbor	10.00 –12.00	10.00 –12.00	10.00 –12.00
Philadelphia	10.00 –12.00	10.00 –12.00	10.00 –12.00
Baltimore	11.00 –12.00	11.00 –12.00	11.00 –12.00
Boston	11.50 –13.00	11.50 –13.00	11.50 –13.00

‡Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167°F, and not less than 122°F.; 50% recovery at 221°; 90% at 311°; 96% at 347° end point 374°F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

WATER WHITE KEROSINE			
New York harbor	5.75	5.75	5.75 – 6.00
Philadelphia district	6.00	6.00	6.00
Baltimore district	6.00	6.00	6.00
GAS OIL: 28-34 Gravity			
New York harbor	4.00 – 4.50	4.50	4.50
Boston district	4.00 – 4.50	4.50	4.50
FURNACE OIL: 36-40 Gravity			
New York harbor	5.00 – 5.50	5.50	5.50
Boston district	5.00 – 5.50	5.50	5.50
GRADE C BUNKER OIL (Lighterage 5c per bbl. additional)			
New York harbor	$0.95	$0.95	$0.95
Boston district	$0.95	$0.95	$0.95
DIESEL OIL			
New York harbor	$1.65	$1.75	$1.75

†Nominal.

New York Export Market

(Lubricating oils are per gal. in bbls. F.a.s. New York)

	May 11	May 4	April 27
CYLINDER OILS (Pennsylvania Products)			
Bright stock, No. 8 color	24.00 –25.00	24.00 –25.00	24.50 –25.00
Bright stock, No. 6½ color diluted	23.00 –24.00	23.00 –24.00	23.50 –24.00
600 D filtered	22.00 –25.00	22.50 –25.00	22.50 –25.00
600 Warren E filtered	18.00 –21.00	18.00 –21.00	18.00 –21.00
600 stm. refd. unfiltered	14.50 –16.00	14.50 –16.00	14.50 –16.00
650 stm. refd. unfiltered	17.00 –20.00	17.00 –20.00	18.00 –20.00
600 flash steam refined	17.50 –20.00	17.50 –20.00	18.50 –20.00
630 flash, steam refined	23.00 –25.00	23.00 –26.00	24.00 –26.00
RED PARAFFIN OILS (Vis. 100°)			
300 vis. No. 6½ color	17.00 –20.00	17.00 –20.00	17.00 –20.00
250 vis. No. 6 color	16.50 –17.50	16.50 –17.50	16.50 –17.50
200 vis. No. 6 color	14.75 –17.00	14.75 –17.00	14.75 –17.00
PALE PARAFFIN OILS (Vis. 100°)			
230 vis. No. 3¾ color	21.50	21.50	21.50
180 vis. No. 3¼ color	18.00 –20.00	18.00 –20.00	18.00 –20.00
100 vis. No. 2¼ color	12.50 –15.00	12.50 –15.00	12.50 –15.00

Wax Market

(Melting points are A.M.P. method. Prices in cents per pound, f.a.s. carload lots.)

NEW YORK	May 11	May 4	April 27
124-126 Yellow crude scale	1.95	1.95	2.00
122-124 White crude scale	2.00	2.00	2.10 – 2.15
124-126 White crude scale	2.00	2.00	2.10 – 2.15
123-125 Fully refined	3.125– 3.25	3.123– 3.25	3.125– 3.25
125-127 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
128-130 Fully refined	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
130-132 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
133-135 Fully refined	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
135-137 Fully refined	4.625	4.625	4.625
NEW ORLEANS			
124-126 Yellow crude scale	1.95	1.95	2.00
122-124 White crude scale	2.00	2.00	2.10 – 2.15
124-126 White crude scale	2.00	2.00	2.10 – 2.15
123-125 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
125-127 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
128-130 Fully refined	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
130-132 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
133-135 Fully refined	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions covering bulk shipments of 20,000 barrels or more, for export and / or coastwise shipment unless otherwise noted.)

GASOLINE	Prices May 11	Prices May 4	Prices April 27
U. S. Motor	4.25 – 4.50	4.50	4.50
60-62, 400 e.p.	4.50 – 4.75	5.00	5.00
61-63, 390 e.p.	4.75 – 5.00	5.25	5.25
64-66, 375 e.p.	5.00 – 5.25	5.50	5.50
U. S. Motor, (cases cargoes)	$1.60	$1.60	$1.60
64-66, cases (cargoes)	$1.70 –$1.72	$1.70 –$1.72	$1.70 –$1.72
KEROSINE			
44 water white	4.75 – 5.00	5.00	5.00
41-43 prime white	3.75 – 4.00	4.00	4.00
Water white, cases (cargoes)	$1.40	$1.40	$1.40
Prime white, cases (cargoes)	$1.30	$1.30	$1.30
GAS & BUNKER OILS			
*26-30 translucent gas oil	3.00	3.00	3.00
*30 plus translucent gas oil	3.00	3.00	3.00
Grade C bunker oil, for ships' bunkers, per bbl.	$0.80	$0.80	$0.80
Grade C bunker oil, per bbl. in cargoes	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65

*Less than ½ of 1% sulphur.
†Represents sales only.

MEXICAN CRUDE AND BUNKER OILS (f. o. b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid, per bbl.	$0.46	$0.46	$0.46
Grade C bunker oil for bunkering, taxes paid, per bbl.	$0.80	$0.90	$0.90
VENEZUELA CRUDE			
F. o. b. deepwater, Lake Maracaibo region	$0.70 –$0.76	$0.70 –$0.76	$0.70 –$0.76
SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F cold test 0 Tanker, f. o. b. Gulf oil terminals.)			
100 vis. No. 2 unfiltered pale	4.75 – 5.50	4.75 – 5.75	4.75 – 5.75
200 vis. No. 3 unfiltered pale	6.75 – 7.50	6.75 – 8.25	6.75 – 8.25
300 vis. No. 3 unfiltered pale	7.75 – 8.50	7.75 – 9.50	7.75 – 9.50
500 vis. No. 3½ unfiltered pale	8.75 – 9.50	8.75 –10.50	8.75 –10.50
750 vis. No. 4 unfiltered pale	10.25 –11.00	10.25 –12.75	10.25 –12.75
1200 vis. No. 4 unfiltered pale	14.00 –14.75	14.00 –16.00	14.00 –16.00
200 vis. No. 5-6 red oil	6.00 – 6.75	6.00 – 6.75	6.00 – 6.75
300 vis. No. 5-6 red oil	7.00 – 7.75	7.00 – 7.75	7.00 – 7.75
500 vis. No. 5-6 red oil	7.50 – 8.25	7.50 – 9.00	7.50 – 9.00
750 vis. No. 5-6 red oil	9.25 –10.00	9.25 –11.50	9.25 –11.50
1200 vis. No. 5-6 red oil	13.00 –13.75	13.00 –15.00	13.00 –15.00

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	May 11	May 4	April 27
Gasoline, U. S. Motor, 53-55 Gravity	3.50 – 4.25	3.50 – 4.25	3.50 – 4.25
Gasoline, U. S. Motor-blends and special cuts	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75
Gasoline, 400 e.p. blend	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Gas Oil, 30-34 per bbl.	$0.85 –$0.90	$0.85 –$0.90	$0.85 –$0.90
Diesel Oil, 27 plus, per bbl.	$0.85 –$0.90	$0.85 –$0.90	$0.85 –$0.90
Bunker oil, 14-18 per bbl.	$0.55 –$0.70	$0.55 –$0.70	$0.55 –$0.70
Fuel oil, 14-18 per bbl.	$0.55 –$0.80	$0.55 –$0.80	$0.55 –$0.80
Kerosine, 38-40 w.w., 125-150 flash, per gal.	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75
Cased Goods			
Gasoline, U. S. Motor	$1.45 –$1.55	$1.45 –$1.55	$1.45 –$1.55
Gasoline, 400 e.p. blend	$1.55 –$1.65	$1.55 –$1.65	$1.55 –$1.65
Kerosine, 38-40 w.w., 125-150 flash	$1.40 –$1.45	$1.40 –$1.45	$1.40 –$1.45

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	May 11	
	Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	21	18
Gulf to U. K. or Continental ports*	10-11	†10
North Atlantic to U. K. or Continental ports*	9/6	†8/6
Calif. to North Atlantic ports (not E. of N. Y.)	$0.45-$0.50	$0.45-$0.50
Gulf to North Atlantic ports (not E. of N. Y.)**	14-15	15

*Continental ports in the range between Bordeaux and Hamburg, both inclusive. **Venezuela loading same rate, for Tampico 2c to 3c per bbl. additional. †Two ports discharged.

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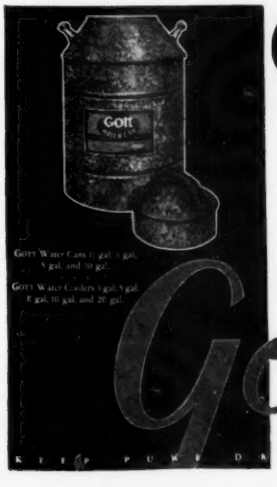

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The GOTT Water Can is the safe, handy way to keep a clean supply of pure water always handy wherever you may be... It's health insurance ...*your supply store has them.*

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H. P. GOTT MFG. CO. • Winfield, Kansas

KEEP PURE DRINKING WATER ALWAYS HANDY

Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect May 11, 1931, as Posted by Principal Marketing Companies

S.O.NEW JERSEY TERRITORY

	Gasoline Total				Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Atlantic City, N. J.	10.7	3	13.7	15.7	11.5
Newark, N. J.	9.7	3	12.7	14.7	10.5
Annapolis, Md.	11.2	4	15.2	16.2	11
Baltimore, Md.	10.4	4	14.4	15.4	9.5
Cumberland, Md.	12.2	4	16.2	17.2	12
Washington, D. C.	10.9	2	12.9	13.9	10.0
Danville, Va.	12.0	5	17	18	11.8
Norfolk, Va.	10.5	5	15.5	16.5	10.0
Petersburg, Va.	11.5	5	16.5	17.5	11.3
Richmond, Va.	10.9	5	15.9	16.9	10.7
Roanoke, Va.	12.2	5	17.2	18.2	12
Charleston, W. Va.	11.7	4	15.7	16.7	11.5
Keyser, W. Va.	12.3	4	16.3	17.3	12.1
Parkersburg, W. Va.	10.4	4	14.4	15.4	10.2
Wheeling, W. Va.	11.6	4	15.6	16.6	11.4
Charlotte, N. C.	12.5	6	18.5	19.5	11
Hickory, N. C.	12.8	6	18.8	19.8	12.6
Mt. Airy, N. C.	12.7	6	18.7	19.7	12.5
Raleigh, N. C.	12.4	6	18.4	19.4	12.2
Salisbury, N. C.	12.7	6	18.7	19.7	12.5
Charleston, S. C.	10.5	6	16.5	17.5	10.3
Columbia, S. C.	12.4	6	18.4	19.4	12.2

Note: 2c per gallon discount off retail t.w. price of gasoline to dealers thru S. O. New Jersey territory, except Maryland and Washington, D. C. where discount is 3c.

S. O. NEW YORK

Greater New York City:					
Boroughs of Manhattan, Bronx, Queens & Kings	11.3	2	13.3	15.3	10
Borough of Richmond	11.7	2	13.7	15.7	12
Albany, N. Y.	12.6	2	14.6	16.6	10.5
Buffalo, N. Y.	11.8	2	13.8	15.8	10
Rochester, N. Y.	12	2	14	16	10
Syracuse, N. Y.	12.8	2	14.8	16.8	10.5
Boston, Mass.	11.5	3	14.5	16.5	11
Augusta, Me.	12.8	4	16.8	18.8	12.8
Manchester, N. H.	12.4	4	16.4	18.4	11
Burlington, Vt.	13.3	4	17.3	19.3	11
New Haven, Conn.	12.6	2	14.6	16.6	10
Providence, R. I.	11.7	2	13.7	15.7	11

Discounts on gasoline: 2c per gal. off posted t.w. price to dealers, thru territory, except 3c to dealers inNew York City, effective Feb. 20, 1931.

ATLANTIC REFINING

Pittsburgh, Pa.	12	*	12	17	12
Philadelphia, Pa.	12	*	12	17	12
Allentown, Pa.	12	*	12	17	12
Erie, Pa.	12	*	12	17	10
Scranton, Pa.	12	*	12	17	12
Altoona, Pa.	12	*	12	17	12
Dover, Del.	12	3	15	17	12
Wilmington, Del.	12	3	15	17	12
Boston, Mass.	11.5	3	14.5	16.5	11
Springfield, Mass.	12.5	3	15.5	17.5	11
Worcester, Mass.	12.3	3	15.3	17.3	11
Fall River, Mass.	12.1	3	15.1	17.1	11
Providence, R. I.	11.7	2	13.7	15.7	11
Hartford, Conn.	12.5	2	14.5	16.5	10
New Haven, Conn.	12.6	2	14.6	16.6	10
Atlantic City, N. J.	11.2	3	13.2	16.2	11.5
Camden, N. J.	10.3	3	13.3	15.3	10.6
Trenton, N. J.	10.7	3	13.7	15.7	11
Annapolis, Md.	11.7	4	15.7	16.7	11
Baltimore, Md.	10.9	4	14.9	15.9	9.5
Hagerstown, Md.	12.4	4	16.4	17.4	11.7
Richmond, Va.	11.4	5	16.4	17.4	10.7
Wilmington, N. C.	11.4	6	17.4	18.4	10.4
Brunswick, Ga.	12	6	18	20	**14
Jacksonville, Fla.	9	6	15	17	12

Note: 2c per gal. discount off t.w. price of gasoline on sales to dealers; discount to commercial accounts under contract for one year in accordance with Code of Ethics.

*3-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosine prices include 1c state tax.

S. O. KENTUCKY

Lexington, Ky.	12	5	17	18	12
Louisville, Ky.	11	5	16	17	11
Paducah, Ky.	12	5	17	18	11
Covington, Ky.	11	5	16	17	11
Jackson, Miss.	10	5	15	13	11.5
Vicksburg, Miss.	11	5	16	18	11.5
Birmingham, Ala.‡‡	13	4	17	19	13
Mobile, Ala.‡	13	4	17	19	13
Montgomery, Ala.*	13	4	17	17	13.5
Macon, Ga.	12	6	18	18	†13
Atlanta, Ga.	10	6	16	18	*†12.5
Augusta, Ga.	12	6	18	20	†14
Savannah, Ga.	12	6	18	18	†12
Jacksonville, Fla.	9	6	15	17	12
Miami, Fla.	12	6	18	20	13
Tampa, Fla.	11	6	17	17	12
Pensacola, Fla.**	10	6	16	18	13

Note: Net price of gasoline to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosine at Montgomery included.

†Georgia kerosine prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

‡Mobile gasoline prices include 1c city tax.

‡‡Birmingham gasoline prices include 1c city tax.

*†3c discount off t.w. price of oil at Atlanta, meeting competition.

Latest Changes in Tank Wagon Prices

Gasoline

S. O. New Jersey—T. w. and s. s. cut ½c, thru territory, except Delaware unchanged, **May 6.**

S. O. Ohio—T. w. cut 1c, s. s. cut 2c, thru Williams county, both to 15c, including 4c tax, **May 9.**

S. O. Indiana—Stanolind Blue t. w. cut 1c, s. s. cut 2c, Wichita, to 9.8c and 8.8c respectively, including 3c tax, **May 4.**

Stanolind Blue s. s. only cut 0.6c, St. Joseph, to 10.9c, including 3c state and city taxes, **May 4.**

Magnolia Petroleum—T. w. and s. s. cut 1c, Fort Worth, to 12c and 14c including 4c tax, **April 2.**

S. s. only cut 3c, Tulsa, to 13c, including 5c tax, **April 28.**

Continental Oil—T. w. and s. s. cut 1½c, thru Montana, **May 9.** Points carried in this tank wagon table not affected.

S. O. California—Tank truck and retail prices cut 1c, Portland, to 10.5c and 13.5c, **May 1** and **May 2** respectively.

Tank truck prices cut 1c, Seattle and Tacoma, both to 10c, including 5c tax, **May 2.**

Retail prices cut 1c, Seattle and Tacoma, both to 13c, **May 4.**

Aviation Gasoline

S. O. New Jersey—T. w. cut 1½c, Newark, to 15.4c, **May 9.**

S. O. OHIO

	Gasoline Total				Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Ohio statewide	12	4	16	17	13
Defiance, Hancock, Marion and Wyandot counties	12	4	16	16	13
Williams county	11	4	15	15	13

Note: Discount on gasoline to dealers and commercial consumers generally thru Ohio is 2c per gal. off above t.w. prices except in counties where prices are below statewide schedule, discount is generally 3c.

Discount on kerosine to dealers and commercial consumers is 3c per gal. off t.w. price thru Ohio.

S. O. INDIANA

Chicago, Ill.	11	3	14	14	9
Decatur, Ill.	11.4	3	14.4	14.4	9
E. St. Louis, Ill.	10.7	3	13.7	13.7	8.2
Joliet, Ill.	11.4	3	14.4	14.4	9
Peoria, Ill.	11.4	3	14.4	14.4	9
Quincy, Ill.	11.2	3	14.2	14.2	8.8
Springfield, Ill.	11.4	3	14.4	14.4	9
Indianapolis, Ind.	11.3	4	15.3	15.3	10.1
Evansville, Ind.	11.1	4	15.1	15.1	9.9
South Bend, Ind.	11.4	4	15.4	15.4	10.2
Detroit, Mich.	11.8	3	14.8	14.8	10.7
Grand Rapids, Mich.	11.7	3	14.7	14.7	10.6
Saginaw, Mich.	11.9	3	14.9	14.9	10.8
Green Bay, Wisc.	11.6	4	15.6	15.6	9.4
Madison, Wisc.	11.3	4	15.3	15.3	9.1
Milwaukee, Wisc.	11.1	4	15.1	15.1	8.9
La Crosse, Wisc.	12.2	4	16.2	16.2	10
Minneapolis, Minn.	12.2	3	15.2	15.2	9.9
Duluth, Minn.	12.5	3	15.5	15.5	9.9
Mankato, Minn.	12.1	3	15.1	15.1	9.7
Des Moines, Ia.	11.5	3	14.5	14.5	9.3
Davenport, Ia.	11.5	3	14.5	14.5	9.3
Sioux City, Ia.	11.1	3	14.1	14.1	8.9
Mason City, Ia.	11.5	3	14.5	14.5	9.3
St. Louis, Mo.	*10.9	2	12.9	12.9	8.3
Kansas City, Mo.	†11.9	2	13.9	13.9	7.6
St. Joseph, Mo.	†11.5	2	13.5	13.5	7.5
Fargo, N. D.	13.9	3	16.9	16.9	11.9
Grand Forks, N. D.	14.2	3	17.2	17.2	12.2
Minot, N. D.	13.9	3	16.9	16.9	11.9
Pierre, S. D.	12	4	16	16	10.4
Huron, S. D.	12.3	4	16.3	16.3	10.7
Wichita, Kans.	9.8	3	12.8	12.8	7.8
Bartlesville, Okla.	8	5	13	16	7.5

Above prices are on Red Crown gasoline. Stanolind Blue gasoline prices are normally 2c under those shown above. At the following points, these prices are below normal on Stanolind Blue:

		Total		
	T.W.	Tax	T.W.	S.S.
Chicago	9	3	12	11.25
St. Louis	*8.9	2	10.9	9.9
St. Joseph, Mo.	†9.5	2	11.5	10.9
Detroit, Mich.	9.8	3	12.8	11.9
Wichita, Kan.	6.8	3	9.8	8.8

*Includes city tax of ½c.

†Includes city tax of 1c.

Discounts: New Q. D. A., effective May 11, 1931, on gasoline in any quantity, thru territory, except Chicago, discount off s.s. price:

To re-sellers only: on Ethyl gasoline, 3c per gal. off s.s. price; Red Crown, 2.5c per gal.; and on Stanolind Blue gasoline, 1c per gal. In Chicago, discounts are 1c higher in each instance than those shown above.

To consumers: same discounts as above for territory and Chicago, except discounts are based off tank wagon price, and affect purchases of 1,000 gallons or more per month.

S. O. NEBRASKA

Omaha, Neb.	8.9	4	12.9	12.9	9.25
McCook, Neb.	12	4	16	17.75	10.75
Norfolk, Neb.	11.75	4	15.75	16.75	9.75
North Platte, Neb.	12.75	4	16.75	17.75	10.5
Scottsbluff, Neb.	12	4	16	16	10.25

Note: Discounts: 1c per gal. off tank wagon price of gasoline for 1,000 gallon dumps per month to consumers taking tank wagon delivery only; discount applying only at normal points.

Above prices include these inspection fees on both gasoline and kerosine, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosine; Arkansas, 1/20c on both: Florida, 1/8c on both; Illinois, 3/100c on both; Indiana, 1/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both: Missouri, 1/50c to 1/2c on both; Nebraska 3/100c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosine; Wisconsin, 1/25c on both.

Kerosine inspection fees only, per gallon; Iowa 7/100c; Michigan, 1/5c to 4/5c per gal.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

These Prices in Effect May 11, 1931, as Posted by Principal Marketing Companies

S. O. LOUISIANA

	Gasoline Posted Retail T.W.	Tax	Gasoline Total Posted Retail T.W.	Gasoline Posted Retail S.S.	Oil T.W.
Little Rock, Ark.	10.5	6	16.5	17.5	11
Alexandria, La.	10.5	*6	16.5	17.5	†12
Baton Rouge, La.	10.5	5	15.5	16.5	†12
New Orleans, La.	9.5	*6	15.5	16.5	†12
Lake Charles, La.	10.5	*6	16.5	17.5	†12
Shreveport, La.	10.5	5	15.5	16.5	†12
Lafayette, La.	10.5	*6	16.5	17.5	†12
Bristol, Tenn.	13.5	5	18.5	19.5	14
Chattanooga, Tenn.	12.5	5	17.5	18.5	13
Knoxville, Tenn.	13	5	18	19	13.5
Nashville, Tenn.	12	5	17	18	12.5
Memphis, Tenn.	10	5	15	16	10

Note: Discounts in S. O. La. territory: To dealers and commercial consumers from the tankwagon, 2c per gal. off posted retail t.w. price.

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax and 1c parish tax. New Orleans kerosine price includes 1c parish tax in addition to 1c state tax.

†Kerosine price in Louisiana includes 1c state tax.

MAGNOLIA PETROLEUM

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Muskogee, Okla.	8	5	13	16	8
Oklahoma City	6	5	11	13	8
Tulsa, Okla.	8	5	13	13	8
Fort Smith, Ark.	10.5	5	15.5	16.5	11
Little Rock, Ark.	10.5	6	16.5	17.5	11
Texarkana, Ark.*	12	4	16	16	11
Dallas, Tex.	11	4	15	18	10
Fort Worth, Tex.	8	4	12	14	10
Houston, Tex.	10	4	14	18	11
San Antonio, Tex.	10	4	14	18	10
El Paso, Tex.	10	4	14	18	12

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

CONTINENTAL OIL

Denver, Colo.	11	4	15	18	12.5
Pueblo, Colo.	10	4	14	17	12
Grand Junc., Colo.	12	4	16	19	14.5
Casper, Wyo.	11	4	15	18	10
Cheyenne, Wyo.	12	4	16	19	11.5
Butte, Mont.	12	5	17	20	16
Helena, Mont.	15	5	20	23	16
Salt Lake City, Utah.	13.5	3.5	17	20	16
Boise, Ida.	*15.5	5	20.5	..	18
Twin Falls, Ida.	**15.5	5	20.5	..	18
Albuquerque, N. M.	11	5	16	20	14

*Less 2c on gasoline at time of delivery.

**Less 3.5c on gasoline at time of delivery at Twin Falls.

S. O. CALIFORNIA

	Gasoline State Tax	Gasoline Tank Truck	Gasoline *Retail	Oil T.W.
San Francisco, Cal.	3	8	11	15.5
Los Angeles, Cal.	3	7.5	10.5	15.5
Fresno, Cal.	3	8	11	17
Phoenix, Ariz.	5	17.5	20	20
Reno, Nev.	4	16	20	19
Portland, Ore.	4	10.5	13.5	16.5
Seattle, Wash.	5	10	13	16.5
Spokane, Wash.	5	17	20	20.5
Tacoma, Wash.	5	10	13	16.5

Note: No discounts off above gasoline prices; tank truck prices are those to resale trade; wholesale prices are generally 6c above tank truck prices, except at Phoenix 1c; Reno and Spokane 4c.

*Retail prices are those of Standard Stations, Inc., marketing subsidiary of the Standard Oil Co. of California.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline T.W.	Tax	Gasoline Total T.W	Gasoline S.S	Oil T.W.
Toronto	16	5	21	24.5	17
Ottawa	17	5	22	25.5	18
North Bay	20	5	25	30.5	21
Fort William	19.5	5	24.5	28	19.5
Border Cities, including Windsor	16	5	21	24.5	15

MANITOBA

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Winnipeg	18	5	23	27	18.5

SASKATCHEWAN

Regina	22	5	27	31	22

ALBERTA

Edmonton	23	5	28	31.5	23
Calgary	19.5	5	24.5	28	19.5

BRITISH COLUMBIA

Vancouver	21	5	26	28	22

QUEBEC

Montreal	17	5	22	25.5	18
Quebec City	19	5	24	27.5	20
Three Rivers	19	5	24	27.5	20

NEW BRUNSWICK

St. John	18.5	5	23.5	27.5	20.5
Moncton	18.5	5	23.5	27.5	20.5

NOVA SCOTIA

Halifax	18.5	5	23.5	27.5	20.5

PRINCE EDWARD ISLAND

Charlottetown	18.5	5	23.5	27.5	20.5

Note: In districts surrounding these points 1c additional is added to city price.

NAPHTHA PRICES

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	10.7	12.7	14.2
Detroit	13.4	14.9	15.7
Kansas City	†11.9	†13.4	†14.2
Milwaukee	12.4	*15.9	*16.7
Minneapolis	**16.7	**18.2	**19
St. Louis	11.6	13.1	13.9
New York		14	20
Boston		17	20

*Includes 2c state tax. †Includes 1c city tax.

**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)

New York harbor	10.00
Philadelphia district	10.08
Providence	10.50

Tank Wagon or Steel Barrels

New York City	14
Syracuse	17
Rochester	17
Buffalo	16
Providence	17
Boston	17
Bridgeport	15
Newark	16
Philadelphia	14
Lancaster	17
Altoona	17
Baltimore	17

Note: 2c off above t.w. prices to large buyers in some instances.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories showing state and municipal taxes:

S. O. NEW JERSEY

Prices in Effect May 11, 1931

	T.W.	Tax	Total T.W.
Newark, N. J.	15.4	*	15.4
Baltimore, Md.	16.2	4	20.2
Washington, D. C.	17	2	19

*New Jersey road tax of 3c does not apply on aviation gasoline, exemption being claimed at time of purchase.

All above prices are on Stanavo Aviation Gasoline.

COLONIAL BEACON OIL CO.

New York City	17.5	2	19.5
Boston	19	2	23

S. O. PENNSYLVANIA

Philadelphia, Pa.	16	3	19
Pittsburgh, Pa.	16	3	19
Altoona, Pa.	16	3	19

S. O. OHIO

Thru Ohio	15	4	19

Discounts given by S. O. Ohio: For airport delivery only; 2,000 gals. or over per month, 1c per gal.; 6,000 gals. or over per month, 2c; 12,000 gals. and over per month, 3c; 24,000 gals. and over per month, 4c.

S. O. INDIANA

	T.W.	Tax	Total T.W.
Chicago	14	3	17
Indianapolis, Ind.	14.3	4	18.3
Detroit, Mich.	14.8	3	17.8
Milwaukee, Wis.	14.1	2	16.1
Minneapolis, Minn.	15.2	3	18.2
St. Louis, Mo.	13.4	2.5	15.9
Kansas City, Mo.	13.9	3	16.9
Fargo, N. D.	16.9	3	19.9
Huron, S. D.	15.3	4	19.3
Wichita, Kan.	12.8	3	15.8

In. S. O. Indiana territory, buyer pays state and city taxes on aviation gasoline, and if he can get a refund from the state, he does so. Kansas City tax of 3c includes 1c city tax; St. Louis tax of 2.5c includes ½c city tax.

S. O. LOUISIANA

New Orleans, La.	18	6	24
Nashville, Tenn.	20	5	25
Memphis, Tenn.	19	5	24

2c per gal. discount off above posted retail t.w. prices to dealers and commercial consumers.

S. O. NEBRASKA

Omaha	16.25	4	20.25

2c per gal. refund to reseller.

CONTINENTAL OIL CO.

Denver, Colo.	14	4	18
Cheyenne, Wyo.	15	4	19
Helena, Mont.	18	5	23
Salt Lake City, Utah.	16.5	3.5	20
Albuquerque, N. M.	15	5	20
Boise, Ida.	*18.5	5	23.5

*Less 2c on aviation gasoline at time of delivery

S. O. CALIFORNIA

Phoenix, Ariz.	17.5	4	21.5
Los Angeles, Cal.	16.5	3	19.5
San Francisco, Cal.	17	3	20
Reno, Nev.	21	4	25
Portland, Ore.	17.5	4	21.5
Seattle, Wash.	17.5	3	20.5
Spokane, Wash.	21.5	3	24.5

Note: 4c per gallon added to t.w. price, in S. O. California territory, to customers taking delivery direct into the fuel tank of planes.

Correction

Prices of Grade C bunker oil for bunkering, taxes paid, f.o.b. steamer, at Tampico, in the Gulf Coast Bulk Market, in the issues of May 6 and April 29, have been in error at 90 cents per barrel. Correct prices as of May 4 and April 27 were 80 cents per barrel instead of the 90 cents shown on pages 98 and 114 of the May 6 and April 29 issues respectively.

Virginia Jobbers to Meet in May

ROANOKE, Va.—The spring meeting of the Virginia Oil Men's Association will be held on May 21 and 22 at Charlottesville, Va., according to Paul P. Hunter, president.

Correction

The American Austin Co. informs us the capacity of its transmission is 2/3 pint. NATIONAL PETROLEUM NEWS Capacity Charts should be corrected accordingly. The company previously informed us the capacity was 2¾ pints.

That's Dollars And "Sense" Talk

HACKNEY permanent steel barrels have long been famous for their seamless, leak-proof construction; their patented raised openings, which drain the contents to the last drop—or full removable heads, which make emptying and cleaning so easy; their ability to take hard knocks without denting — attractive appearance—and easy handling.

Those are advantages for which many companies would gladly pay a premium. But instead — Hackneys frequently save them more than 40% in their shipping costs.

Permanent containers, however, are not always the most economical. And Hackney sells thousands of dollars worth of single trip containers every year. *But the possible savings in using Hackney returnable steel barrels and drums are too great to pass up without an investigation.* Let us work with you in analyzing your shipping problems to see if permanent containers cannot lower your shipping costs.

A Few Prominent Hackney Users

Grasselli Chemical • Pittsburgh Plate Glass • Procter & Gamble • C. & N. W. R. R. • Delco Light Co. • Southern Cotton Oil • White Eagle Oil Refg. Co. Paper Makers Chemical • Du Pont

PRESSED STEEL TANK COMPANY

1141 Continental Bank Bldg. . . . . Chicago
1317 Vanderbilt Concourse Bldg. . . New York City
5719 Greenfield Avenue . . . . Milwaukee, Wis.
485 Roosevelt Building . . . . . Los Angeles

Hackney
MILWAUKEE

Crude Oil Prices (in Effect May 11, 1931)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Apr. 23, 1931) $2.00
Penna. Grade Oil in National Transit Lines (Effective Apr. 23, 1931) *1.75
Penna. Grade Oil in Southwest Penna. Pipe Lines (Effective Apr. 27, 1931) 1.60
Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Apr. 23, 1931) 1.50
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Apr. 23, 1931) 1.25
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective March 11, 1931) 0.80
Somerset oil in main system of Cumberland Pipe Line (posted by Ashland Refining Co.) (Effective March 6, 1931) $0.75
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929) $0.60
*Oil run prior to July 1, 1929 is 5c less per bbl.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines (Effective April 1, 1931) $0.60

MICHIGAN

(Posted by Dixie Oil Co.)

Traverse and Dundee (Muskegon), effective March 5, 1931, same gravity and price schedule as Stanolind posts in Oklahoma, Kansas and North Texas, which see below.

(Posted by Pure Oil Co.)

Midland, Midland County (March 13, 1931) $0.75

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 6, 1931

Wooster	$0.99	Princeton	$0.80
Lima	0.90	Illinois	0.80
Waterloo	1.20	West Kentucky	0.75
Indiana	0.50		

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Effective Oct. 28, 1930

Petrolia $1.50
Oil Springs 1.57

OKLAHOMA, KANSAS and †NORTH TEXAS

Prices of *Stanolind Crude Oil Purchasing Co.

(In Oklahoma, Kansas, †North and North Central Texas)

Effective March 5, 1931

Below 29	$0.43	35-35.9	$0.57
29-29.9	0.45	36-36.9	0.59
30-30.9	0.47	37-37.9	0.61
31-31.9	0.49	38-38.9	0.63
32-32.9	0.51	39-39.9	0.65
33-33.9	0.53	40 and above	0.67
34-34.9	0.55		

*Prairie Oil & Gas withdrew postings in Oklahoma, Kansas and Texas, Jan. 1, 1931.

On March 5, 1931 these crude purchasers met above prices: Continental Oil Co., Eason Oil Co., Mid-Continent Petroleum Corp., Standard Oil Co. of Kansas, Tidal Refining Co., White Eagle Oil & Refining Co.

On March 10, 1931, these met Stanolind: Humble and The Texas Co.

†Except these North Texas districts, prices for which see below: Wichita Falls, Wilbarger, Foard, Montague, and Cooke counties.

North Texas: †Wichita, Wilbarger, Foard, Montague, Cooke Counties

Effective April 21, 1931

Below 29	$0.33	35-35.9	$0.47
29-29.9	0.35	36-36.9	0.49
30-30.9	0.37	37-37.9	0.51
31-31.9	0.39	38-38.9	0.53
32-32.9	0.41	39-39.9	0.55
33-33.9	0.43	40 and above	0.57
34-34.9	0.45		

Above prices posted by Stanolind also in West Central Texas, including Young, Palo Pinto, Stephens and Eastland counties.

Humble Oil & Refining Co.

(In East, North and North Central Texas

Effective March 10, 1931

Effective March 10, Humble pays same prices as Stanolind Crude Oil Purchasing Co. pays in Oklahoma, Kansas, etc., in these East Texas, North and North Central Texas fields: Sabine, Mexia, Powell, Boggy Creek, Richland, Wortham and Currie.

Effective April 21, Humble posted in Ranger, North Texas, Moran and Cooke Counties, same prices as Stanolind in North Texas, Wichita, Wilbarger, etc., which see above.

Magnolia Petroleum Co.

(In Oklahoma, Kansas, †North, *East and East Central Texas)

Effective March 5, 1931

Magnolia posts same prices in all three states as Stanolind, in Oklahoma and Kansas, except these lower grades:

Below 26	$0.40	27-27.9	$0.42
26-26.9	0.41	28-28.9	0.43

*Effective March 26, 1931, in East Texas.

†Except these North Texas fields, where prices are same as Humble and Stanolind in the same districts: Ranger, Clay, Montague, Wichita, Wilbarger, Young, Comanche, Eastland, Erath and Stephens, Tex., effective April 23, 1931.

Carter Oil Co.

(Oklahoma and Kansas)

March 10, 1931, same prices as Stanolind in Oklahoma and Kansas, which see.

PANHANDLE TEXAS

Humble Oil & Refining Co.

Effective April 21, 1931

Hutchinson and Carson Counties:

Below 35	$0.30	38-38.9	$0.38
35-35.9	0.32	39-39.9	0.40
36-36.9	0.34	40 and above	0.42
37-37.9	0.36		

Gray County

Below 35	$0.33	38-38.9	$0.41
35-35.9	0.35	39-39.9	0.43
36-36.9	0.37	40 and above	0.45
37-37.9	0.39		

Above prices met by Magnolia and The Texas Co. on April 23 in Hutchinson, Carson and Gray counties.

Wheeler County: Posted by Magnolia Pet. Co. Effective Apr. 10, 1930. Humble withdrew Wheeler county postings Apr. 10, 1930.

Below 30	$0.755	37-37.9	$1.11
30-30.9	0.805	38-38.9	1.145
31-31.9	0.855	39-39.9	1.18
32-32.9	0.905	40-40.9	1.215
33-33.9	0.955	41-41.9	1.25
34-34.9	1.005	42-42.9	1.285
35-35.9	1.04	43-43.9	1.32
36-36.9	1.075	44 and above	1.355

WEST TEXAS and NEW MEXICO

Humble Oil & Refining Co.

Effective April 21, 1931

Pecos and Winkler, all grades $0.35
Crane, Upton, Crockett, Ector, Howard and Glasscock Counties, all grades $0.30
Lea County, N. Mex. $0.325

April 23, 1931, The Texas Co. same prices in Crane, Upton, Winkler and Lea counties as Humble.

April 23, Magnolia same prices as Humble in Winkler, Crane, Upton, Howard, Glasscock and Mitchell counties.

SOUTH and SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

All Effective April 21, 1931

Mirando $0.60
Salt Flat 0.53
Darst Creek 0.53
Pettus, Bee County 0.75

(Posted by Magnolia Petroleum Co.)

Effective April 23, 1931

Corsicana Heavy $0.38
Luling 0.38

(Posted by The Texas Co.)

Markham $0.50

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto, Sabine, Cotton Valley, Sarepta and Carterville.

Effective March 10, 1931

Below 29	$0.43	35-35.9	$0.57
29-29.9	0.45	36-36.9	0.59
30-30.9	0.47	37-37.9	0.61
31-31.9	0.49	38-38.9	0.63
32-32.9	0.51	39-39.9	0.65
33-33.9	0.53	40 and above	0.67
34-34.9	0.55		

Smackover, all grades $0.45
Bellevue 0.45
*Urania, La. (April 21, 1931) 0.50
†East El Dorado (Calion) 0.45

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

March 10, 1931, The Texas Co. same schedule in Louisiana as Standard.

March 10, Magnolia met Standard schedule in Louisiana-Arkansas fields except it posts the same low grades in La.-Ark. as in Mid-Continent.

Stephens, Arkansas

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective March 10, 1931

Below 29	$0.38	29 and above	$0.41

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective April 21, 1931

Grades A	$0.70	29-29.9	$0.69
Grades B:		30-30.9	0.71
Below 25	0.60	31-31.9	0.73
25-25.9	0.61	32-32.9	0.75
26-26.9	0.63	33-33.9	0.77
27-27.9	0.65	34-34.9	0.79
28-28.9	0.67	35 and above	0.81

On April 23, 1931, The Texas Co. posted same prices on Grades A and B Gulf Coast crude as Humble, except its schedule on Grades B goes to top grade of 40 and above, at 91 cents; a 2 cent differential applies for each gravity from Humble's 35 and above.

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Humble, Pierce Junction, Sugarland, Refugio county, and Raccoon Bend. All other fields are Grades A only.

Specifications for Grade "A" crude: Gravity: 25° and below, at 60° F: Viscosity: not less than 100 seconds at 100° F. Saybolt.
Sulfur: not over 4%.

Grade "B" includes all Coastal crude which does not meet the test for "A" grades.

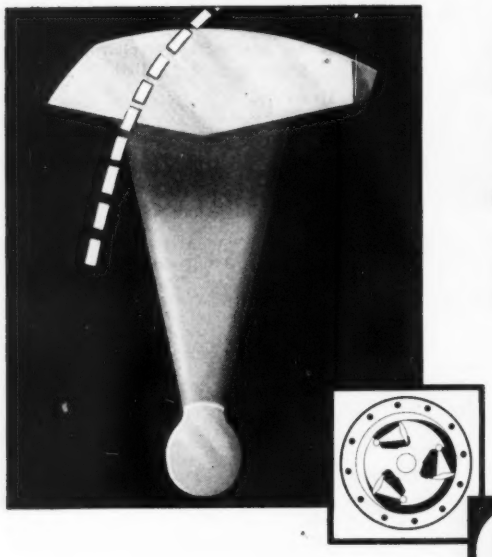
40c For East Texas Crude

TULSA—On May 9 Tidal Oil Co. posted a flat price of 40 cents per barrel for East Texas crude.

NEW YORK—C. F. Herington, contracting engineer, for the past nine years in charge of sales, engineering and erection of complete pulverized coal plants for Heyl & Patterson, Inc., Pittsburgh, has opened his own office at 1440 Broadway, New York City.

CLEVELAND — The United States Bureau of Mines has a new motion picture film, "The Story of Gasoline," showing from the drilling of wells through to the filling of automobile tanks at service stations. No charge is made for the use of the film, and it may be obtained for exhibition purposes by clubs and so on, by applying to the Pittsburgh station of the Bureau of Mines.

• *Why the* "BUCKET DESIGN" *Provides Longer Sustained Efficiency in* BLACKMER ROTARY PUMPS



ORDINARILY as wear occurs in a pump the clearance between working parts constantly becomes greater, resulting in slippage of the liquid—cutting down efficiency, and increasing pumping costs. In the "bucket" type rotary, however, the buckets take the brunt of the wear, and as wear occurs the buckets simply swing further out of the rotor—resting always with equal lightness against the cylinder wall. The dotted line in the illustration shows how much of the bucket may wear away without losing its perfect contact with the cylinder wall. Until this point of wear is reached, which obviously requires a long, long period of service, the bucket type pump continues to perform with maximum efficiency.

Blackmer Rotary Pumps are made in units containing one to four pumps—each having a capacity of 5 to 500 gallons per minute. They are most successfully handling more than seventy-seven liquids and semi-solids and pumping more gallonage in the fields they serve than any other pump.

This is but one of several tangible superiorities of the bucket design, and consequently just one of several reasons why Blackmer Rotary Pumps Deliver *More Gallons per Dollar;* for the bucket design is Blackmer's exclusively. May we send you the complete facts?

BLACKMER PUMP COMPANY

1809-1 CENTURY AVE. GRAND RAPIDS, MICHIGAN

BLACKMER ROTARY PUMPS

Crude Oil Prices (in Effect May 11, 1931)

(Prices are per barrel at the well)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

ROCKY MOUNTAIN FIELDS
(Posted by Midwest Refining Co.)
(Salt Creek prices effective March 5, 1931)

Salt Creek, below 29°		$0.43
" "	29-29.9	0.45
" "	30-30.9	0.47
" "	31-31.9	0.49
" "	32-32.9	0.51
" "	33-33.9	0.53
" "	34-34.9	0.55
Salt Creek	35-35.9	0.57
" "	36-36.9	0.59
" "	37 and above	0.61

(Posted by Ohio Oil Co. and Midwest Refining Co.)

Elk Basin	$0.90
Grass Creek light	0.90
Big Muddy	0.65
Lance Creek	0.98
Rock Creek	0.66
Mule Creek	1.20
Rex Lake	1.10
Pondera	1.45
†Osage	0.50
†Cat Creek, Mont.	0.90
Sunburst, Mont.	1.55
†Hogback, N. Mex. (April 1, 1931)	0.90

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin. Others are prices of Ohio Oil Co.

CALIFORNIA CRUDE
†Standard Oil Co. of California
Effective March 31, 1931

Gravity	Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach, Inglewood, Olinda-Brea Canon, Athens-Rosecrans-Dominguez, Torrance, Richfield, Whittier, LaHabra, Montebello, Coyote Hills and Santa Fe Springs	Elwood Terrace	Newhall, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Coalinga and Wheeler Ridge	*Santa Paula	*Orcutt
14-19.9	$0.65	F.O.B. Ship	$0.55	$0.60	$0.55
20-20.9	.65		.53	.58	.53
21-21.9	.62		.51	.56	.51
22-22.9	.59		.49	.53	.49
23-23.9	.56		.47	.50	.47
24-24.9	.53		.45	.47	.45
25-25.9	.50		.43	.44	.43
26-26.9	.47		.41	.41	.41
27-27.9	.44		.39	.38	.39
28-28.9	.41		.37	.35	.37
29-29.9	.38		.35	...	.35
30-30.9	.35		...	...	...
31-31.9	.35		...	...	...
32-32.9	.35		...	...	...
33-33.9	.35		...	...	...
34 and above	.35	$0.35	...	...	...

*Posted by Union Oil Co. of California, effective March 30, 1931.

†Postings on Kettleman Hills crude discontinued by Standard, March 10, 1931; on Playa del Rey, March 31, 1931.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	May 11	May 4
Soda Ash Light 58% bags, cwt.	$1.20-1.38	$1.20-1.38
Silicate of Soda 60 deg. drums, cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. tank cars, cwt.	$0.70	$0.70
Silicate of Soda 40 deg. drums, cwt.	$1.00	$1.00
Sal Soda wks.	$0.90-1.20	$0.90-1.20
Caustic Soda 76% solid, cwt.	$2.25-2.50	$2.25-2.50
Sulfuric Acid 60 deg. tank cars, f. o. b. shipping point per ton	$11.00-12.50	$11.00-12.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks, lb.	1.75	1.75

Compounders' Supplies

	May 11	May 4
Vegetable Oils		
Linseed carloads, spot, lb.	9.00	8.80
Tanks, spot	8.40	8.20
Soya Bean, Tank, coast, lb.	7.10	7.10
Oleic Acid		
Distilled, tanks, lb.	7.50	7.50
Distilled, bbls, lb.	8.75	8.75
Saponified, tanks, lb.	7.75	7.75
Saponified, bbls, lb.	8.625	8.625
Lard Oils		
Prime Winter Strained, lb.	13.00	13.00
Extra Winter Strained, lb.	9.75	9.75
Extra, lb.	9.50	9.50
Extra No. 1, lb.	8.75	9.00
No. 1, lb.	8.50	8.75
No. 2, lb.	8.25	8.50
Tallow oil, lb.	8.00	8.25
Neatsfoot Oil		
Pure, bbls, lb.	11.25	11.25
Extra, bbls, lb.	9.00	9.25
No. 1 bbls, lb.	8.75	9.00
Cold Pressed, lb.	16.00	16.00
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	38–40	38–40
Light Pressed, tank cars, N. Y., gal.	30–32	30–32
Yellow bleached, gal.	42–44	42–44
Whale, extra winter bleached, gal.	75	75
Naval Stores		
Steam, distilled turpentine, N. Y., gal.	51	51
Steam, distilled turpentine, Savannah, gal.	49	49
Gum turpentine, N. Y., gal.	53	53.5–54.5
Gum turpentine, f. o. b. cars Savannah, gal.	46	46.5–50
Wood Rosin, N. Y., bbl.	$5.10	$5.20
Wood Rosin F, Savn'h, bbl.	$5.00	$5.10
Gum Rosin B, N. Y., bbl.	$4.80	$4.70
Gum Rosin B, f. o. b. cars Savannah, bbl.	$4.05	$3.95
Rosin oil, pure, gal.	54	54
Rosin, oil, compounded, gal.	48	48
Pine Tar		
Kiln burnt, bbl.	$10.00-11.00	$10.00-11.00
Retort, bbl.	$11.50-12.50	$11.50-12.50
Alcohol		
Denatured Formula 5, in tanks, per gal.	24	24

Bread and Gasoline Fight

LOS ANGELES.—When a baking company at Visalia, Cal. opened a service station to sell gasoline as a side line, service stations in the district retaliated by carrying bread as a side line.

The baking company sold gasoline at 9 cents, as compared with the 10.5 cent price posted by Standard Stations, Inc., at Los Angeles. The service stations then began selling two loaves of bread at 25 cents, and finally two at 15 cents. Stations in the rural districts up to Goshen and Porterville, Cal. are said to have joined the price war.

Check on Gasoline Sellers

HARRISBURG, Pa., May 9.—The Pennsylvania Department of Revenue is conducting a complete check of retail gasoline dealers in that state. The check is to help in exposing unlicensed dealers and collecting unpaid gasoline taxes.

Stocks of Crude and Refined Oils Except Gasoline Cut in March

CLEVELAND, May 9

TOTAL stocks of petroleum and refined products continued to decline in March, according to the U. S. Bureau of Mines. On March 31 total stocks of all oils were 656,237,000 barrels, a fall of 2,048,000 barrels during the month. In the past 12 months total oil stocks have fallen 44,444,000 barrels.

The cut in total stocks was due almost entirely to the liquidation of crude oil inventories. East of California crude stocks were reduced 4,224,000 barrels and in California crude and heavy fuel stocks were reduced 546,000 barrels.

The only important increase in petroleum stocks was gasoline. Stocks of finished motor fuels increased 2,870,000 barrels during the month to 48,225,000 barrels. This stock level, however, was 7,000,000 barrels below that held a year ago. Natural gasoline stocks at plants increased 192,000 barrels.

Stocks of the less important refined products were reduced. Kerosine stocks were cut 177,000 barrels to 6,300,000 barrels. A year ago kerosine stocks were 2,155,000 barrels larger.

Lubricating oil stocks were reduced 201,000 barrels in March to 10,710,000 barrels. This stock level is 1,149,000 barrels larger than a year ago.

Wax stocks were cut 20,794,000 pounds to 208,620,000 pounds. A year ago wax stocks stood at 230,734,000 pounds.

Fuel and gas oil stocks east of California were reduced 54,000 barrels in March to 32,105,000 barrels. Current stocks thus are nearly 1,000,000 barrels below last year.

During the first quarter exports of all products except wax were lower than in the first quarter of 1930. Domestic demand for most commodities was better, however.

Domestic demand for gasoline in the first quarter exceeded the first quarter last year by 1.16 per cent. Imports increased 7.93 per cent or 270,000 barrels and exports were lower by 7,014,000 barrels or 19.53 per cent.

Export demand for lubricating oils was 28.57 per cent lower in the first quarter than in the same period last year. Domestic demand, however, increased 6.34 per cent.

Both export and domestic demand for wax was better. Export demand increased 6.84 per cent over export demand the first quarter of 1930 and domestic demand increased 25.24 per cent.

Refiners ran 16,000,000 barrels less crude to their stills in the first quarter than in the same three months last year. Gasoline output was off about 9,000,000 barrels, kerosine output 3,000,000 barrels, and lubricating oils 2,000,000 barrels.

Aluminum Coated Wood Reduces Station Investment

MOBILE, ALA.

THE Harbor Oil Co. is keeping down its original investment and maintenance costs at service stations by erecting inexpensive buildings of aluminum treated wood.

A station, as pictured above, costs about $300 without land or equipment. Of this amount about $275 is for labor in building, and for the aluminum treated lumber. The other $25 is for a coat of aluminum paint, the treatment of the wood serving as the base coat.

The station also is portable. By placing skids from the main section to support the canopy posts the building could be moved to another location.

The inside walls are not finished as the winters are not severe, and there is no ceiling in the canopy.

Inside the station there is space for an attendant's desk and for storage of goods. In a rear corner, with an outside entrance, is a wash room.

Two stations of this design have been erected in Mobile by the Harbor Oil Co. With the low original cost the company wipes out the charge quickly, and where leases expire the station can be moved. Maintenance costs are reduced also as the station can be restored by washing.

Wisconsin Jobbers Meet May 20

MILWAUKEE—The annual meeting and election of officers of the Wisconsin Petroleum Association will be held May 20 at the Pfister Hotel, Milwaukee, according to a recent bulletin of the association.

Members are asked to present nominations for officers and directors before May 20 to a nominating committee consisting of T. Clark, Clark Oil Co., Manitowoc, Wis.; Joseph Theisen, Robert Seiber Oil Co., Racine; and R. E. Andrew, Pennsylvania Oil Co., Madison, Wis.

An open meeting of the Wisconsin Committee on the code of ethics will be held in the morning and the association meeting in the afternoon. Speakers have not yet been announced.

LOS ANGELES.—Vincent Carroll, 60, port inspector of Diesel engines for the Standard Oil Co. of California at San Francisco, was drowned recently when he was crowded off a dock by a farewell crowd which gathered to see a famous woman depart.

Over 700 Jobbers *Say "Yes" To This!*

DOES it pay to market your own brand of motor oil, providing you can get a super-quality—one made from 100% Pennsylvania crude—at a price that makes substantial profits certain?

More than 700 oil jobbers who buy from this 50 year old refinery organization would answer "Yes." *And they ought to know.*

We'll make up any grade of "Pennsylvania" motor oil (Sharples Process) to your own specifications. Or if you prefer, we'll recommend one of our own tried and tested specifications that will exactly suit your needs.

Whether your order calls for tank cars, compartment tank cars, barrels or drums, you are assured of prompt and efficient service. Your request for details and quotations will receive immediate attention.

Guaranteed 100% PURE PENNSYLVANIA OIL

Permit No. 31

THE FREEDOM OIL WORKS CO.

FREEDOM, PA.

Refineries at FREEDOM and CORAOPOLIS, PA.

Also available for immediate shipment

150 Viscosity Sharples Bright Stock
85/90 Viscosity Sharples Bright Stock
100% Pennsylvania Neutrals
600 Steam Refined
650 Steam Refined
600 Flash Steam Refined
630 Flash Steam Refined
Freedom Filtered Kerosene Oil

FREEDOM

100% PENNSYLVANIA OILS

FO-503

Fig. 882, Jenkins Bronze Angle Check Valve
Fig. 881, Jenkins Iron Body Angle Check Valve

STOP EVERY DROP

JENKINS Gasoline Foot Valve and Jenkins Angle Check Valve on the suction pipe of a gasoline pump provide drop-tight closing at all times. The reliability of Jenkins saves costly excavating for repair or replacement.

Jenkins Valves for gasoline are fitted with specially compounded discs to resist corrosion. Correct seating is always assured by a unique Jenkins floating guide which keeps the disc in perfect alignment. Jenkins are unaffected by excessive operation, traffic vibration, or climate variations. Write for Form 146 fully describing Jenkins Gasoline Foot Valves and Jenkins Angle Check Valves.

JENKINS BROS.
80 White Street, New York, N. Y.

Fig. 880, Jenkins Bronze Foot Valve

JENKINS

absolutely drop-tight

GASOLINE FOOT VALVES & ANGLE CHECK VALVES

Transactions in Oil Shares on New York Stock Exchange

1929 High	1929 Low	1930 High	1930 Low	Listed Shares	Par Value	Company	Div. Rate	Last Paid	Transactions Week Ended May 9 Sales	First	High	Low	Last	Change§
42⅝	17½	42¼	16½	922,075	N.P.	Amerada Corp.	50cQ	Jan. 30, 31	1,300	17¾	18⅛	17	17½	+ ½
64¾	12½	37	5¼	209,180	N.P.	American Republics Corp.	....	.....	400	6⅛	7⅜	6⅛	7⅜	+ 1⅜
47¼	34½	51	30	2,240,000	$25	Associated Oil	50cQ	Mar. 31, 31	10	29⅜	29⅜	29⅜	29⅜	+ ⅛
77¾	30	51⅜	16⅜	2,683,868	25	Atlantic Refining Co.	25cQ	Mar. 16, 31	18,200	15⅛	15⅞	14½	15	— ⅛
49⅛	20	34	8¾	2,257,108	25	Barnsdall Corp. A	25cQ	Feb. 16, 31	28,700	8¼	8¾	7½	8¼	— ½
34½	25	35	21	2,060,966	25	California Petroleum Corp.	....	Jan. 1, 29	.....	.....	.....	.....	.....	.....
32⅞	12½	20⅛	8¾	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	1,300	8¾	8¾	8⅜	8⅜	— ⅛
37¾	18	30½	7¾	4,610,258	N.P.	Continental Oil (Delaware)	....	.....	26,100	7½	7½	6⅝	7½	0
94¾	42¼	71⅜	22¾	410,857	$100	General Asphalt Co.	75cQ	Mar. 16, 31	12,500	21⅝	23⅞	21⅛	22⅝	+ 1¼
109	26	116⅞	29¼	250,000	100	Houston Oil	....	.....	4,700	39½	42¾	39	40⅞	+ 1⅞
..	..	10½	6⅜	.....	..	Houston Oil, new	....	.....	4,400	9	9½	8¾	8¾	— ⅛
53	13¼	28⅝	3	699,066	10	Indian Refining	....	Dec. 15, 20	1,100	2½	2⅝	2½	2½	0
51¼	11½	27¾	3½	568,816	10	do certificates	....	.....	.....	.....	.....	.....	.....	.....
38⅜	16½	29½	21¼	3,994,150	N.P.	Lago Oil & Transport	....	Aug. 2, 27	.....	.....	.....	.....	.....	.....
18	7	12	3½	1,187,701	N.P.	Louisiana Oil Refining	....	.....	600	2⅞	3	2¾	2¾	0
100¼	80	89½	60	40,000	$100	do pfd.	$1.62½Q	Feb. 14, 31	.....	.....	.....	.....	.....	.....
18½	5⅞	10⅜	1¾	330,000	N.P.	Maracaibo Oil Exploration	....	.....	200	1⅞	1⅞	1⅞	1⅞	+ ⅛
295	176	182	150	459,428	$100	Mexican Petroleum	$3Q	Jan. 20, 31	10	150	150	150	150	—17
105	102	100	100	120,000	100	do pfd.	$2Q	Jan. 20, 31	.....	.....	.....	.....	.....	.....
69⅜	9¼	37	9¾	1,244,383	N.P.	Mexican Seaboard Oil	....	Oct. 15, 24	39,300	15⅞	16⅞	14⅜	15⅞	+ ⅞
39⅞	22⅜	33	11	1,899,138	N.P.	Mid-Continent Petroleum	50cQ	Feb. 16, 31	5,400	8⅞	9⅜	8⅝	9	+ ¼
3⅜	¾	2½	¾	908,171	N.P.	Middle States Oil ctfs.	....	.....	.....	.....	.....	.....	.....	.....
..	..	32	16	6,708,086	N.P.	Ohio Oil Co.	25cQ	Mar. 14, 31	43,500	10⅜	10½	8¼	8⅝	— 1¾
69	40¼	64¼	42	1,000,000	$50	Pan American Petrol. & Trans.	....	Oct. 20, 27	100	29	29	29	29	0
69¼	40½	67½	32	2,422,221	50	do B	....	Oct. 20, 27	.....	.....	.....	.....	.....	.....
15¼	3	12¾	1⅜	199,370	N.P.	Panhandle Prod. & Refg.	....	.....	100	2¼	2¼	2¼	2¼	+ ¼
76	47½	80	47½	25,666	$100	do pfd.	....	July 2, 23	.....	.....	.....	.....	.....	.....
..	..	27½	6	2,937,900	N.P.	Petroleum Corp. of America	37½cQ	Dec. 31, 30	20,700	7	7⅛	7	7	— ⅛
47	24¼	44¾	12	2,670,089	N.P.	Phillips Petroleum Co.	50cQ	Jan. 2, 31	10,300	7⅜	7⅞	7⅜	7½	0
3⅜	1	2½	½	1,184,917	$25	Pierce Oil Corp.	....	.....	1,700	⅝	⅝	⅝	⅝	— ⅛
51½	20	52	7½	150,000	100	do pfd.	....	Feb. 1, 22	400	9¾	11	9½	11	+ 1
5⅞	½	7⅛	1⅜	2,500,000	N.P.	Pierce Petroleum Corp.	10c	Feb. 16, 31	18,500	1⅜	1⅜	1⅜	1⅝	— ¼
65⅜	40½	54	11¼	2,435,670	$25	Prairie Oil & Gas Co.	50cQ	Mar. 31, 31	6,900	11¾	11¾	10	10½	— 1⅛
65	45	60	16⅜	4,050,000	25	Prairie Pipe Line Co.	75cQ	Mar. 31, 31	2,000	21½	21½	19⅝	19⅝	— 1
25⅛	4	31	1	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 23	100	3	3	3	3	0
46⅜	25½	38	11½	56,907	50	do pfd.	....	May 4, 25	950	8½	9½	6½	7⅜	— 2⅛
30¾	20	27¼	7¾	3,038,370	25	Pure Oil Co.	....	Sept. 1, 30	8,200	6	6½	6	6⅜	+ ⅛
116	108	114¾	90½	130,000	100	do 8% pfd.	$2Q	Apr. 1, 31	550	84	84	73	78¾	— 6¼
49⅜	22⅜	28⅛	4⅛	2,891,735	25	Richfield Oil (California)	....	Sept. 1, 30	6,200	1½	1⅝	1¼	1¼	— ¼
42⅛	15	25⅜	5	1,235,270	N.P.	Rio Grande Oil Co.	....	July 25, 30	2,900	4¼	4⅝	4¼	4½	+ ¼
64	43⅛	56½	37⅛	951,310	$13.40	Royal Dutch (N. Y. shares)	$1.3404	Jan. 31, 31	30,000	28⅞	31⅛	28⅞	30⅜	+ ⅜
55¾	43¾	48⅜	26	77,492	£2	Shell Trans. & Trading	96.6c	Jan. 23, 31	.....	.....	.....	.....	.....	.....
31¾	19	25½	5⅞	13,069,076	N.P.	Shell Union Oil Corp.	....	June 30, 30	19,300	5	5½	5	5⅛	+ ⅛
..	..	106¾	62	400,000	100	do pfd.	$1.37½Q	Apr. 1, 31	2,600	35	36	25½	30	— 6½
40¼	15	37	5⅝	869,255	10	Simms Petroleum Co.	....	Sept. 15, 30	1,600	6	6½	5⅞	6	+ ¼
45	21	32	9¾	5,455,665	N.P.	Sinclair Consolidated Oil Corp.	25cQ	Jan. 15, 31	50,600	9¾	9¾	8⅝	8⅝	— 1¼
111	103	112¾	86	154,685	100	do pfd.	$2Q	Feb. 14, 31	1,000	95	95⅛	95	95	0
46½	42	42	10⅛	1,097,650	$25	Skelly Oil Co.	50cQ	Dec. 15, 30	1,100	5⅞	5⅞	5⅛	5⅛	— ¼
..	..	99¾	43	120,000	100	do pfd.	$1.50Q	Feb. 1, 31	600	28	29	28	29	0
..	..	106	98	750,000	100	S. O. Export Corp. pfd.	$2.50S.A.	Dec. 31, 30	200	104	104	104	104	— ⅝
81⅞	51½	75	42¼	13,016,434	N.P.	S. O. California	62½cQ	Mar. 16, 31	18,200	37¼	39	36⅛	37½	+ 1
..	..	49	14¾	320,000	$25	S. O. Kansas	25cQ	Mar. 16, 31	400	12⅛	12⅛	12⅛	12⅛	+ ⅛
83	48	84⅞	43½	25,443,643	25	S. O. New Jersey	‡25cQ	Mar. 16, 31	51,400	37⅝	38⅜	36⅝	37⅛	— ⅜
48⅜	31¾	40⅝	19¾	17,809,530	25	S. O. New York	40cQ	Mar. 16, 31	27,300	19⅞	19⅞	18⅝	18¾	— ½
86⅜	55	70	39	1,416,911	N.P.	Sun Oil Co.	25cQ	Mar. 16, 31	300	35	35	35	35	0
105½	100	107¾	97¾	100,000	$100	do pfd.	$1.50Q	Mar. 2, 31	150	99	99	98	98	+ 1
24	5¼	9⅜	¾	1,026,979	N.P.	Superior Oil Corp.	....	.....	900	1	1	¾	¾	— ¼
71⅞	50	60½	28¼	9,850,724	$25	The Texas Corp.	75cQ	Apr. 1, 31	48,600	22	23	20¼	20½	— 1⅝
23½	9½	14½	4	929,947	10	Texas Pacific Coal & Oil	....	Dec. 31, 29	500	4	4	4	4	0
23½	10	17⅝	5⅞	5,881,980	N.P.	Tide Water Associated Oil	30cS.A.	Feb. 16, 31	5,600	4⅝	5	4⅝	4¾	+ ¼
90⅞	74⅜	89¾	56	732,550	$100	do pfd.	$1.50Q	Jan. 2, 31	1,200	50	50½	49	49	— 1
40	14	31	13	2,191,820	N.P.	Tide Water Oil Co.	20cQ	Dec. 31, 30	.....	.....	.....	.....	.....	.....
97½	85¾	94⅜	71	199,443	$100	do pfd.	$1.25Q	Feb. 16, 31	.....	.....	.....	.....	.....	.....
..	..	24	12⅜	3,339,150	N.P.	Transcontinental Oil	....	May 1, 30	.....	.....	.....	.....	.....	.....
57	42⅜	50	20⅜	2,201,008	$25	Union Oil Co. (California)	50cQ	Feb. 10, 31	4,200	17½	18⅛	17	17⅛	+ ⅝
..	..	38½	23	1,254,048	N.P.	Union Tank Car Co.	40cQ	Mar. 2, 31	.....	.....	.....	.....	.....	.....
42⅜	15	27	4⅜	777,603	N.P.	Warner Quinlan Co.	....	July 3, 30	900	3¾	3¾	3⅝	3⅝	— ⅛
38	25	29½	26	490,000	N.P.	White Eagle Oil & Refg.	....	Apr. 20, 30	.....	.....	.....	.....	.....	.....
29¾	12⅞	21	6⅛	428,967	N.P.	Wilcox Oil & Gas Co.	....	May 10, 28	700	6½	7	6½	7	0

*New high †New low ‡Also extra s-Stock §From close of preceding week. Total sales 534,670

Pittsburgh Stock Exchange

Transactions Week Ended May 8, 1931

	Sales	High	Low	Last	Change Over Week
Ark. Nat. Gas pfd.	175	6½	6⅜	6½	0
Lone Star Gas....	21,150	16¾	†14¼	16¼	— ⅝
Phoenix Oil.....	500	.15	.15	.15	0
Plymouth Oil....	830	9¾	†9¼	9½	— ¼
Shamrock O. & G.	700	6⅞	6½	6½	— ½
West. Pub. Serv..	10,144	8½	7¾	8¼	+ ⅛
Wiser Oil.....	100	10	10	10	—2½

Imperial Oil Earnings

TORONTO, May 11.—Net profits of Imperial Oil, Ltd., of Canada were $19,020,360 in 1930, compared with $26,350,309 in 1929. Earnings from operations in Canada were $11,453,765. compared with $20,951,803. Earnings outside Canada were $9,105,838, compared with $7,593,641. After income tax and reserves Imperial's earnings averaged 71.6 cents a share in 1930, compared with 99.4 cents a share in 1929. All directors were re-elected at the annual meeting.

Gas Franchise War in Canadian Cities

TORONTO, May 1.—The Windsor city council has protested to the provincial government against recent legislation giving the Minister of Mines control over natural gas prices and franchises, and asks that the question of franchise be left in the hands of the rate payers.

The Southern Ontario Gas Co., controlled by Dominion Natural Gas Co., a Cities Service subsidiary, has made formal application to the city for a franchise to supply natural gas at 85 cents per thousand cubic feet for the first 100 cubic feet and 65 cents for the next 19,000 cubic feet. The proposed price would be an increase over the rates of the Windsor Gas Co., a Union Natural Gas Co. subsidiary, which now supplies the city, for the first 10,000 cubic feet, but would be lower for larger amounts of gas used.

Western to Distribute Barnsdall Products

TULSA, May 9.—Preliminary to the time when the Barnsdall Refineries, Inc., will be delivering gasoline to Minneapolis and St. Paul through the Great Lakes Pipe Line Co. system, in which it is a partner, the company has made arrangements with the Western Oil and Fuel Co., Minneapolis, whereby the latter will be distributors of Barnsdall products. Directly and through several subsidiaries, the Western Oil & Fuel Co. distributes in western Wisconsin, Minnesota, North Dakota and part of South Dakota.

N. P. N. Service Record

Some of the requests for information, data and advice, which were taken care of in various National Petroleum News offices in the past week are:

The following letter was received recently from the president of an Ohio oil jobbing company to whom N.P.N. had given, among other things, estimates on the average number of miles traveled each year by each car, what cars get more than 15 miles per gallon of gasoline, what motor vehicle registrations were in 1930, etc.:

"I hasten to thank you for your letter of April 25 which I have just received.

"When writing you I did not anticipate receiving such complete information as you sent me, and I fear that I caused you considerable trouble in securing it. However, I greatly appreciate having this information and I am confident it will be of considerable value to me."

* * *

President of Pennsylvania liquid gas producer and distributor furnished names and addresses of companies operating absorption plants north of Oklahoma.

* * *

Florida oil distributor seeking contracts for gasoline, kerosine and lubricating oils, furnished names and addresses of Gulf Coast refiners who could supply him.

* * *

Illinois export contractor and customs broker referred to source for a directory of refineries and also for names of Mid-Continent wax makers who are members of the association he mentions.

* * *

New York oil company given data available here on natural gas producer he inquired about.

* * *

Vermont, Minnesota and New York oil companies furnished names and addresses of companies they inquire about, including U. S. Industrial Alcohol Co.

* * *

Mid-Continent producer informed where to obtain data on Fry pool, Brown county, Tex.

* * *

New York inquirer told of present situation in Hudspeth county, Tex.

* * *

Other inquiries answered the past week as to where various types of equipment may be purchased include these:

Electric auto lifts, Connecticut branch of large eastern oil refiner furnished names and addresses of two manufacturers;

Ice chests for cooling pop bottles, South Dakota oil distributor given names and addresses of two makers;

Follow-up system for lubricating jobs, Minnesota inquirer told where he may obtain details of system he mentions;

Filters, Michigan oil company told where it may buy;

Oil marketing equipment, list of jobbers furnished Missouri oil company;

Dry cleaning machine, California producer-refiner-marketer told where it is obtainable;

Oil bottles and machine for filling them, Florida agent for worldwide oil company furnished with manufacturer's name and address.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

SALES EXECUTIVE experienced marketer petroleum products. Service station, refinery sales. Conversant with lubrication, grease application and manufacture. Traffic and package economy. Budgetary control. Address Box 704.

SALES REPRESENTATIVE: To handle refined products in Ohio and Michigan. Ten years experience selling refinery output. Address Box 718.

SALESMAN WITH 7 years wholesale and retail experience marketing all petroleum products, desires new connection. Have proven sales record. Thorough knowledge of marketing. Age 30. Now located near New York City. Wages, secondary to opportunity for advancement. Address "C. C.," Room 1124, 342 Madison avenue, New York City.

TRAFFIC MANAGER
DESIRES NEW CONNECTION

Twelve years in this capacity with large independent refiner.

Have practised successfully before I.C.C. Can operate your private car line profitably. Best of references.

Address P. O. Box 220,
Fort Wayne, Ind.

Situations Open

LUBRICATING OIL SALESMAN wanted by small well established New York organization where value is rewarded. Experienced with following in Long Island territory. Give complete details and salary expected. Address Box 716.

GASOLINE SALESMEN WANTED

Kansas-Oklahoma refiner wants two experienced gasoline salesmen, one for Oklahoma-Kansas, other for Iowa-Nebraska. Preferably commission basis. Excellent opportunity. Write fully.

Refiner, c/o National Petroleum News,
904 World Bldg., Tulsa, Okla.

Miscellaneous

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Copy must reach us not later than Friday preceding date of issue.

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Tag closed cup A.S.T.M. flash tester in good condition wanted promptly.

Address Box 719

Somebody Can Use Your Outgrown Equipment

Tell them all about it through the Oil Industry Exchange. The cost is small. See rates at bottom of page.

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GOOD AGENTS WANTED to sell lubricating oils and greases on strictly commission basis in barrel lots. Address Box 717.

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Advertisers having box numbers should be addressed in care of National Petroleum News, 1213 West 3rd Street, Cleveland, Ohio, unless otherwise specified.

Standard Oil Stocks on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Outstanding Shares	Par Value	Companies	Div. Rate	Last Paid	Transactions Week Ended May 9 Sales	First	High	Low	Last	Change§
18¾	13½	18½	12¼	.....	£1	Anglo-Amer. Oil voting stk. ctfs..	.....	June 5, 29	.....	....	....	....	....	.....
17¼	11	19	12	.....	£1	do non-voting stk. ctfs.....	.....	June 5, 29	.....	....	....	....	....	.....
2½	¾	1	⅜	500,000	N.P.	Atlantic Lobos Oil.....	.....	.....	.....	....	....	....	....	.....
4¼	1	1½	⅛	200,000	$50	do pfd.....	.....	.....	.....	....	....	....	....	.....
46½	25	25	11¼	40,000	25	Borne Scrymser Co.....	$1S.A.	Oct. 15, 30	100	6¼	6¼	6¼	6¼	— 1¾
74¼	55	69	39⅞	200,000	50	Buckeye Pipe Line Co.....	$1Q	Mar. 14, 31	.....	....	....	....	....	.....
210	130	184⅞	100¼	120,000	25	Chesebrough Mfg. Co.....	‡$1Q	Mar. 31, 31	.....	....	....	....	....	.....
11¾	5⅝	7⅝	3	.....	N.P.	Creole Petroleum Co.....	.....	.....	6,500	2¼	2¼	2	2⅛	— 1/8
75¾	40	65¾	20¼	30,000	$50	Cumberland Pipe Line Co.....	50cQ	Mar. 16, 31	50	22¼	22¼	22¼	22¼	— 4¾
70½	42	54¾	26	50,000	100	Eureka Pipe Line Co.....	$1Q	Feb. 2, 31	50	25¼	25¼	25¼	25¼	— 2½
...	...	63¾	2½	280,000	N.P.	Galena Oil Corp. w.i.....	.....	.....	100	1½	1½	1½	1½	0
...	...	37¼	23½	.....	N.P.	General Petroleum Corp. w.i.....	.....	.....	1,500	18⅜	18⅜	17⅞	17⅞	— 1/8
128	74⅛	119	57¼	2,974,645	$25	Humble Oil & Refg. Co.....	‡50cQ	Jan. 1, 31	4,800	54	54	53	53⅛	0
41	22	30	15	26,490,741	N.P.	Imperial Oil, Ltd.....	12½cQ	Mar. 2, 31	8,900	12¾	13¼	12½	13	+ 1/8
42⅛	26	41	14½	300,000	$10	Indiana Pipe Line Co.....	50cQ	Feb. 14, 31	400	13½	13½	13	13	— 1/4
29⅜	15	24	11⅛	14,247,880	N.P.	International Petroleum Co	25c	Dec. 15, 30	21,200	11⅝	12¼	11⅞	12	+ ⅜
25⅞	10½	22⅜	11½	509,000	$12½	National Transit Co.....	25cQ	Mar. 16, 31	400	13½	13½	13⅛	13⅛	+ 1/8
17¾	10	21	10¼	100,000	10	New York Transit Co.....	40cQ	Jan. 15, 31	100	9⅜	9⅜	9⅜	9⅜	0
63	41	54	26¼	40,000	50	Northern Pipe Line Co.....	$2S.A.	Jan. 2, 31	.....	....	....	....	....	.....
105½	103¾	108	100⅜	600,000	100	Ohio Oil pfd.....	$1.50Q	Mar. 14, 31	.....	....	....	....	....	.....
44½	18⅜	32	12	400,000	25	Penn Mex. Fuel Co.....	$1	Dec. 15, 30	300	10¼	10¼	10	10⅛	+ 1/8
50	29	33	4⅞	160,000	25	Solar Refining Co.....	.....	Dec. 20, 29	.....	....	....	....	....	.....
23½	13	20⅛	6¾	100,000	10	Southern Pipe Line Co.....	50c	Mar. 12, 31	.....	....	....	....	....	.....
60¼	35⅛	45⅞	18	1,200,000	25	South Penn Oil Co	25cQ	Mar. 31, 31	2,300	14¼	14¼	12½	13½	— 3/8
70	45	64	32	35,000	50	Southwest Pa. Pipe Lines.....	$1Q	Apr. 1, 31	.....	....	....	....	....	.....
63	45	59⅜	30	16,850,587	25	S. O. Indiana	50cQ	Mar. 16, 31	16,200	27⅜	27⅝	25⅞	26⅛	— 1/8
46⅓	29	40½	18⅜	2,577,124	10	S. O. Kentucky.....	40cQ	Mar. 31, 31	4,300	18⅛	18¾	17⅝	18	— 1/8
50¼	40	48⅛	34	188,159	25	S. O. Nebraska.....	50cQ	Mar. 20, 31	100	25	25	25	25	0
129	60	108½	43¼	560,000	25	S. O. Ohio.....	62½cQ	Apr. 1, 31	500	50	50	48¼	48¼	— 1¾
.....	.....	.....	.....	120,000	100	do 5% pfd.....	$1.25Q	Jan. 15, 31	60	106	106	105	105	— ¼
124½	113½	122	115¾	70,000	100	do 7% pfd.....	$1.75Q	Dec. 1, 30	.....	....	....	....	....	.....
18	5⅜	10	4	34,158	25	Swan Finch Oil Corp.....	.....	Jan. 15, 29	200	2¾	2¾	2¾	2¾	0
133¾	75½	97⅞	45⅜	5,139,887	25	Vacuum Oil Co.....	$1Q	Mar. 20, 31	50,800	41	41	31½	32½	— 8½

*New high †New low ‡Also extra §From close of preceding week.

Independent Oils on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Par Value	Companies	Transactions Week Ended May 9 Sales	First	High	Low	Last	Change§
.72	⅛	⅜	1/16	$1	Amer. Contr. Oilfields	.....	....	....	....	....	.....
8⅝	1⅛	4½	½	5	Amer. Maracaibo....	8,000	⅞	1	¾	⅞	+ 1/8
4¾	1	1⅜	1⅛	10	Argo Oil.....	.....	....	....	....	....	.....
26	3¾	16¾	4⅝	N.P.	Arkansas Nat. Gas...	1,400	4¾	4¾	4½	4½	— 1/8
24¾	6½	16⅜	4¾	N.P.	do Class A.....	8,500	4¾	4⅞	4½	4⅝	— 1/4
9	4	8⅛	6¼	10	do pfd.....	.....	....	....	....	....	.....
70	50	28½	13½	N.P.	British American Oil..	.....	....	....	....	....	.....
4⅞	⅞	2¾	⅝	¼	Carib Syndicate.....	4,100	1¼	1⅜	1¼	1⅜	+ 1/4
68½	20	44¼	13⅛	N.P.	Cities Service.....	86,200	15	15¾	14¾	15⅛	+ 1/8
99¼	84	93⅞	52	100	do pfd.....	2,000	80¼	80¼	79	80	— 5/8
9¼	8	9	7¼	10	do pref. B.....	200	6⅞	6⅞	6½	6½	+ 1/4
96	81	89⅞	80	100	do pref. BB.....	200	86	86	85	85	— 2⅜
1½	¼	⅛	1/16	1	Colombia Syndicate..	400	1/16	1/16	1/16	1/16	0
15	3⅞	8¼	1⅜	N.P.	Colon Oil Corp.....	900	1¼	1¼	1¼	1¼	u
...	...	21	3⅝	N.P.	Columbia Oil & Gas..	700	3¾	3¾	3¼	3¾	+ ½
11⅛	2½	5⅞	2	10	Consolidated Royalty	.....	....	....	....	....	.....
135	42	74¾	1½	N.P.	Cosden Oil Co.....	800	1⅛	1⅛	1	1	0
87	55	70	10¼	100	do pfd.....	.....	....	....	....	....	.....
2½	¼	1	¼	N.P.	Crown Central Pet...	.....	....	....	....	....	.....
11½	4	..	..	N.P.	Crystal Oil.....	.....	....	....	....	....	.....
51⅛	51⅛	..	..	100	do pfd.....	.....	....	....	....	....	.....
26	6½	13½	4¼	N.P.	Darby Petroleum.....	.....	....	....	....	....	.....
...	...	21¾	21½	N.P.	do new.....	.....	....	....	....	....	.....
11	2	11	2	N.P.	Derby Oil & Refg.....	400	3	3	3	3	0
44	17	60	30	N.P.	do pfd.....	500	30⅝	30⅝	26	26	— 8⅜
...	...	12	12	10	Devonian Oil.....	.....	....	....	....	....	.....
209	115	166⅞	58½	$25	Gulf Oil Corp.....	4,300	52½	52½	50	51	— 1¾
7½	1⅛	4	2¼	N.P.	Homaokla Oil.....	.....	....	....	....	....	.....
...	...	47½	12¾	N.P.	Indian Territory A...	1,400	13½	13½	13	13⅛	+ 3/8
...	...	53½	12⅝	N.P.	do B.....	400	12⅞	12⅞	12⅞	12⅞	+ ½
2⅞	⅜	1¾	⅜	10	Intercontinental Pet..	10,900	1/16	½	⅜	1/16	— 1/16
3⅝	1¼	3	⅞	N.P.	Kirby Petroleum.....	1,400	¾	¾	¾	¾	— 1/8
6⅛	1	4¾	½	N.P.	Leonard Oil & Dev...	800	⅝	¾	⅝	⅝	+ 1/8
38⅞	18	29	5	N.P.	Lion Oil Refg.....	.....	....	....	....	....	.....
67⅞	28	55⅞	19⅝	N.P.	Lone Star Gas.....	11,200	16⅜	17¼	14⅛	16⅜	+ 1/4
...	...	31	5½	$25	MacMillan Petrol....	.....	....	....	....	....	.....
2⅞	¼	½	⅛	1	Magdalena Synd.....	3,300	1/16	⅜	¼	⅜	+ 1/16
38½	14	16	3	N.P.	Margay Oil.....	100	4	4	4	4	— 1
6⅜	2¼	7½	1¾	N.P.	Mexico Ohio Oil.....	400	3	3	3	3	— ½
...	...	11⅞	2¼	N.P.	Middle States A v.t.c.	800	3	3¼	2¾	2¾	+ 1/4
...	...	6	¾	N.P.	do Class B v.t.c.	200	⅞	⅞	⅞	⅞	0
42	8	36⅛	5	5	Missouri-Kansas P.L.	9,200	7⅛	7⅛	5⅞	6⅛	0
1½	¼	¾	⅜	1	Mountain & Gulf Oil.	.....	....	....	....	....	.....
22⅞	7	12⅛	4½	10	Mountain Producers..	600	3⅝	3⅞	3⅝	3⅞	— 1/8
43⅞	24	41⅜	19⅞	N.P.	Nat. Fuel Gas.....	4,900	19⅜	21	19⅜	19½	+ ⅜
5	2¼	3½	1⅛	$5	New Bradford Oil....	600	1⅛	1⅛	1	1	— 1/8
4¾	3⅛	3⅛	2⅛	10	New England Fuel...	.....	....	....	....	....	.....
24½	11⅛	16⅞	4	25	N. Y. Pet. Royalty...	.....	....	....	....	....	.....
18½	6⅛	11¼	2⅛	N.P.	North Central Texas	.....	....	....	....	....	.....
19¼	8⅛	11⅝	3⅞	N.P.	Oilstocks Ltd. A.....	1,900	2¾	2¾	2⅜	2⅜	— 5/8
18¼	8½	11½	4¾	N.P.	do B.....	.....	....	....	....	....	.....
26⅝	12⅛	19½	6½	N.P.	Pacific Western Oil...	400	5⅜	6⅞	5⅜	6¼	+ 1
3½	½	2½	¼	N.P.	Pandem Oil.....	9,900	1/16	1/16	1/16	1/16	— 1/16
10½	2¼	4⅜	1	N.P.	Pantepec Oil.....	100	1⅛	1⅛	1⅛	1⅛	0
25½	13⅛	15	13⅛	$25	Paragon Refg. B. ctfs.	.....	....	....	....	....	.....
28	17	29	19⅛	N.P.	Petroleum Corp.....	.....	....	....	....	....	.....
...	...	5⅞	½	...	do warrants.....	100	⅝	⅝	⅝	⅝	0
37	22	27½	16¼	N.P.	Plymouth Oil.....	500	9⅞	9⅞	9¼	9¼	— 1
16	9	10½	3	$5	Red Bank Oil.....	.....	....	....	....	....	.....
8½	1⅛	5⅜	1	N.P.	Reiter-Foster Oil.....	1,000	1	1	⅞	⅞	— 1/4
25¼	19	23½	7	25	Richfield Oil pfd.....	100	2¼	2¼	2¼	2¼	— 1/8
29	13	25	2¼	N.P.	Root Refining pr. pfd.	.....	....	....	....	....	.....
11	3	8⅝	2	N.P.	Ryan Consolidated...	.....	....	....	....	....	.....
5⅞	1⅞	2½	1⅛	10	Salt Creek Consol....	200	1	1	1	1	+ 1/8
25⅞	9	15¼	5¼	10	Salt Creek Producers.	2,500	5⅛	5⅛	5	5⅛	— 1/8
33⅛	10	8	1¾	25	Shreveport El Dorado	.....	....	....	....	....	.....
...	...	39⅛	39	25	Signal Oil & Gas A...	.....	....	....	....	....	.....
24	9	17	6	N.P.	Southland Royalty...	400	4½	4½	4¼	4¼	— 1/8
12	4	10	2	5	Sunray Oil.....	3,800	2⅝	2⅝	2¼	2½	0
23	7⅛	19½	8	N.P.	Texon Oil & Land....	100	9	9	9	9	— 1/4
81⅛	8⅞	16	8	10	Venezuela Mexico....	.....	....	....	....	....	.....
6½	1⅛	4½	¾	5	Venezuela Petroleum.	600	⅞	1	⅞	1	+ 1/8
9⅛	2	5	2	1	Woodley Petroleum..	.....	....	....	....	....	.....
5⅜	¼	2½	⅜	N.P.	Y Oil & Gas.....	.....	....	....	....	....	.....

*New High †New Low §From close of preceding week.

New York Bonds

Week Ending May 8

	High	Low	Last	Change
Asso. Oil Gold 6s.....	103	102½	103	0
Atlantic Refg. deb. 5s...	102½	101	101	— 1/4
Cal. Pet. 5s.....	90	90	90	0
Cal. Pet. 5½s.....	92	90	90½	+ ½
General Pet. 5s.....	102½	102½	102½	0
Humble Oil & Refg. 5s...	102	100¼	100⅜	—1⅜
Humble Oil & Refg. 5½s	102½	102⅛	102½	+ 1/4
Pan Amer. P & T 6s....	101¾	101⅜	101⅜	— 1/4
Pan Amer. P & T 6s....	44¾	42¼	42¼	—2½
Phillips Pet. 5½s.....	69	60⅞	60⅞	—6⅜
Pierce Oil deb. 8s.....	103	103	103	0
Pure Oil 5½s.....	83½	80	83	+1
Pure Oil 5½s.....	77	74½	75	—1½
Richfield Oil of Calif. 6s..	42½	38¾	39	—3
Shell Union Oil 5s.....	66½	64	66	+2
Shell Union Oil 5s with war.	67¾	65¼	66	—1¼
Sinclair Con. Oil 7s.....	94	93	93	— 7/8
Sinclair Con. Oil 6½s....	87	85¾	86¼	+ 1/8
Sinclair Con. Crude 5½s.	102	101⅞	102	+ 1/8
Sinclair Pipeline 5s.....	100⅜	100⅛	100¼	+ 1/8
Skelly Oil 5½s.....	65	57⅞	57⅞	—7⅛
S. O. N. J. 5s.....	103¼	103	102½	+ ½
S. O. N. Y. 4½s.....	98½	97	98	+ ¼
Union Oil of Calif. 6s A...	104⅛	101⅝	104⅛	+3⅜
Union Oil of Calif. 5s C..	98¾	98½	98½	— ⅜
Union Oil of Calif. 5s war.	90	87	87¾	+1¼
Warner-Quinlan 6s.....	51⅜	51¼	51¼	— 5/8
White Eagle Oil 5½s war.	102½	102¼	102⅜	+ ⅜

New York Curb Bonds

Week Ending May 8

	High	Low	Last	Change§
Cities Serv. 5s '66.....	69¼	67⅞	67⅞	—1⅞
Cities Serv. 5s '50.....	72⅛	70	71	— 1/4
Cities Serv. G. 5½s '42...	72¼	71½	71½	—1
Cities Serv. G. P. 6s '43..	84½	84	84	—1
Cont. Oil 5½s '37.....	92¼	92	92	— 1/8
Empire O & R 5½s '49..	71	70⅛	70⅛	—1⅜
Gulf Oil 5s '37.....	102¼	101½	101¾	— 1/4
Gulf Oil 5s '47.....	101¾	101	101⅛	—1⅜
Independent Oil 6s '39...	79	75	79	+4
Sun Oil 5½s '39.....	101¼	100	101	+ ½
Valvoline Oil 7s '37.....	94⅛	94⅛	94⅛	— ⅜

To Study Naphtha Production

TORONTO, May 5.—Dr. E. H. Boomer, of the University of Alberta, will this summer conduct a series of experiments looking to the utilization of Turner Valley natural gas in the manufacture of benzine. The experiments will be conducted at Calgary in a specially constructed semi-commercial plant to be erected by the Government of Alberta.